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A  
CANDID INQUIRY

INTO THE  
*Education, Qualifications, and Offices*  
OF A  
SURGEON-APOTHECARY;

The several branches of the Profession being  
DISTINCTLY TREATED ON,  
*And suitable methodical forms annexed;*

RESIDES  
Various other topics connected with the principal Office  
are also subjoined;

BY MR. JAMES LUCAS,  
Late a Surgeon of the Leeds Infirmary, from its institution;  
*A Member of the Corporation of Surgeons,*  
And a corresponding Member of the London Medical Society.

“Metuensque futuri  
In pace, ut sapiens, aptarit idonea bello.”

HOR.



BATH

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M.D.CCC.

ENTERED IN STATIONER'S HALL.

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TO

MR. EDWARD ALLANSON,

SURGEON AT LIVERPOOL.

DEAR SIR,

" *THE amity that has for many years subsisted between us has afforded me various opportunities of becoming beneficially acquainted with your professional zeal; while your great experience in all the several topics on which I have treated must enable you to judge of this miscellaneous inquiry, which is somewhat curtailed in order to render it more acceptable to those readers for whom it is principally intended. It is to me obvious that your manner of uniting large wounds by immediate inosculation has paved the way to many particular methods that have been since published,*



and from your observations on after-treatment I borrowed some hints. In coincidence with your maxims, I have traced the art of healing theoretically as well as practically, and have taken pains to point out the necessary distinction, between the success of Surgeons who invariably adhere to all the directions, and such as deviate from the rules prescribed.

I am strongly inclined to think that a Professor of the Art, who has been regularly educated, conversant with Practice in the several provinces, and accustomed to Professional tuition, without any interference with Lecturers, might, during subsequent studies, render himself extremely useful to Students, and more particularly if their moral conduct were, by Parents, intrusted to his occasional control; but the novelty of the subject and a want of opportunity of consulting others have precluded further observations on this topic. The initiation of Pupils, and the invitation to proficiency are such momentous concerns as to

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*plead some excuse for the prolixity of methodical arrangements; nor are you any stranger to the difficulty anxious Preceptors experience in animating young Men to method, consideration, and upright principles.*

*The adscititious wants of Invalids are so frequent, and contrivances by Professors in the Science may have so many advantages, when compared with mechanics, that I have expatiated on Professional Adjuncts.*

*Partnership, and Reports at Coroner's Inquests, however silently passed over by other writers, have appeared to me by no means foreign topics.*

*It is generally asserted, that those who have large families themselves, have a greater share of sympathy, and can more effectually plead the cause of distress, than those who have none; and on this ground I might solicit your assistance in promoting the proposed Charity.*



*Accept my most cordial wishes for the welfare  
of all your family, allow me to inscribe this well-  
intended, however feebly executed tribute of res-  
pect, and believe me to remain*

*Your sincere and faithful Servant,*

BATH,  
March 25, 1800.

*The AUTHOR.*

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## CHAPTER THE FIRST.

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### *On the Education of Medical Pupils.*

#### SECTION THE FIRST.

THE pliancy of Youth is like the malleability of gold, and by the dexterity of able artists may be made to assume chosen forms. Education includes every preparation that is made in our youth, for our wants in manhood, or the sequel of our life. To become a classical scholar not only a natural capacity, but a good share of health may be required.—Could parents be made sensible of the permanent estimation of literary and professional rudiments, or students foresee the lasting reproach of ignorance, the former would need no farther spur to incite their vigilance, nor the latter fail to embrace the advantages offered for their improvement.—The first reflection of some parents has been to select a professional master, without any examination how far their sons have been prepared for the situation of an apprentice.



A parent, who would wish a young man to follow the profession of a Surgeon-Apothecary with credit, or commendable emulation, should take a very early survey of the requisite school-learning, as well as competency of a professional preceptor, and should not fail to count the costs of subsequent studies. To a failure in such necessary and seasonable inquiries may be imputed the ignorance of many adventurous practisers.

When parents have placed their children under proper teachers, they are too apt to neglect exacting obedience, or assisting in the correction of bad habits, whereas they might often animate proficiency, and preclude irreparable misconduct.

Parents are not always adequate judges of the literature necessary to qualify an apprentice to a medical practitioner, but masters, who are or ought to be well acquainted with the requisite rudiments, should be cautious of admitting illiterate youth, incapable of being safely trusted to compound medicines from Latin prescriptions.

## Section the Second.

UNLESS the health, as well as capacity, of a Boy be duly regarded, his studies may be materially retarded, yet the most unhealthy, or weakest Son has sometimes been selected for a medical

Apprentice; as if indisposition were no obstacle to learning, or that an employment liable to harassing fatigue, to untimely calls, and contagious diseases were suited to a distempered frame. As well might it be argued, that the smell of drugs can repair a feeble constitution, or that an Apprentice may be a complaining invalid, instead of an active assistant.—To become master of the science, and bear the drudgery of business, strength of body, and activity of mind are indispensable.

The salubrity of a school, in which a Boy passes much of his time, may be highly worthy of attention. There are many public schools well endowed, yet are damp, or ill ventilated, and besides schools, all apartments that are occasionally crowded with scholars, should be strictly watched, and every method of rendering them healthy be duly studied. The preservation of health is of the utmost consequence for promoting a necessary progress in studious pursuits.

### Section the Third.

EVERY Youth should first be thoroughly instructed in his native tongue, by parsing, and being grounded in grammatical rules; for one who remains ignorant in these rudiments may reason-



ably be expected to be no less deficient in more difficult attainments.

### Section the Fourth.

A clear understanding of that language, in which prescriptions are commonly written, must be obviously necessary for every medical student employed in compounding medicines, and executing directions, prescribed in Latin.—An ability to expound abbreviated characters, and to comprehend their true meaning cannot be dispensed with, but at a risk of fatal consequences. When a scholar has had the beauties of Latin authors happily inculcated, there may be a prospect of such knowledge being retained, and a farther proficiency acquired,—he may pass easier through subsequent studies, and display greater abilities.

### Section the Fifth.

MANY technical terms in the science are derived from the Greek language, hence the comprehension of intricate, and compound names is much facilitated by a knowledge of this element. A student in Medicine will easier ascertain, and remember the titles of maladies, and a pupil studying anatomy can scarcely forget the situation, attachment, figure, or use of a muscle, borrowing

its appellation from that language, nor will a practitioner receive little advantage from such a qualification.

### Section the Sixth.

THERE may not be always time for a Boy to gain a knowledge of French, while at school, yet at some future period an opportunity may offer; calls to distant countries may render such an attainment useful, and learning should never be esteemed burdensome.

### Section the Seventh.

Literature is not a little embellished by a neat, and intelligible hand-writing, which is too often neglected by classical scholars, yet the defect can scarce be compensated for by other accomplishments.—Since Boys in the habit of transcribing copies insensibly imitate the hand-writing, it is essential for parents, and masters, to write as correctly as possible.—The fashion of writing unintelligibly in prescriptions seems to be exploded, and when young men are trusted to compound medicines, the language of them ought to be suited to their capacity.—Unless the Day-book and Ledger of an Apothecary be so well written, as to be capable of affording a plain, and unerring



guidance to young men under tuition, mistakes will frequently ensue, if not fatal blunders be committed.—Correspondences between professional men, and also between Apothecaries, and the friends of invalids, are often required, and except all such descriptions be perspicuous, great inconvenience may result.

### Section the Eighth.

IF Learning be benefited by a neat hand-writing, it may certainly be much more elucidated by an elegant manner of expressing the thoughts. Epistolary compositions are recommended by Mr. Locke, and they are certainly the most instructive exercises to youth, as they may be continued throughout education, and be gradually made not only more arduous, but more amusing. I do not mean a formal transcript dictated by a preceptor, but such studied composition, as is usually the result of natural genius improved by such habitual lessons.

### Section the Ninth.

WHEN a Boy has been taught to write well, he usually begins to learn Arithmetic, but any progress in this useful accomplishment is too frequently checked, by the principal attention being

paid to a classical education. A good arithmetician finds the attainment of it of so much advantage in common life, and it may prove so beneficial to a professional man, that such an acquisition ought not to be overlooked, or disregarded. It is the rudiment of mathematics, and although few Medical Pupils have leisure for making any considerable advances, yet there is no doubt of the benefits capable of being derived from this adscititious accomplishment.

Such qualifications may not only enable a person to be expert in abstruse calculations, but in the choice of annuitants, may induce a taste for useful inquiries into population, and the comparative salubrity of different places, may render more perspicuous perplexing narrations, and proportionate adjustments, or the invention of useful mechanism, for the relief of deformities, or other defects in the system.

### Section the Tenth.

THE ability to write short-hand may be an attainment worth the notice of students, but unless they be able to write it quickly, and to follow a lecturer closely, it will be of little service.

Of amusements the art of drawing claims a preference, as it would be found highly estimable in



assisting the study of anatomy, and botany; as well as contriving, or retaining the forms of pieces of mechanism, or preserving singular appearances.

### Section the Eleventh.

PUBLIC declamations at schools may prove advantageous, in removing diffidence, and preparing young men for passing such examinations, as will be in a subsequent chapter recommended. A spirited youth, apprized of the utility to be derived from compositions, intended to be brought forward as tests of ability, and future promotion, will exert his talents; and an instructor, aware of the frequent inquiries, as to the attainments of a pupil, will find an additional incitement to qualify his scholar.

### Section the Twelfth.

THE books, which Boys should be allowed to read out of school, should be overlooked by judicious masters, or inspected by vigilant parents, in order that good morals may accompany literary acquirements. When young men are removed from their parents to distant schools, a regular correspondence tending to invite improvement in letter-writing should never be neglected, by way of shewing youth, that they are constantly under the watchful eye of their guardian.

A concise and well-expressed letter is a striking characteristic of ability, which seldom fails to procure general esteem, and approbation.

As Grotius has remarked, it is the part of a good master not to crowd his instructions on his scholar, but to dispense such as may suit his abilities.—Although parents should be careful in not suffering illusive fondness, or excessive indulgence on their part to impede the pains bestowed by diligent preceptors, yet these should be equally anxious to render their instructions easy, and amusing.

### Section the Thirteenth.

BEFORE a youth leave school, a professional master should be chosen, that the proper age, and qualifications may be duly examined, and a chance of any humiliating inquiries, or want of suitable accomplishments be precluded, and a farther proficiency capable of being obtained.

Every candidate for serving a medical apprenticeship should be about sixteen years of age; and some advantage may be expected from his having an inclination for the profession.—A youth can seldom be made a good classical scholar, and go through other necessary studies till that period; besides few young men can be ear-



liet trusted with the custody, and compounding of important drugs.

By the profession being resolved on previous to a Boy leaving school, it may be in the power of his teacher to exercise him in some preparatory professional lessons, such as the London Dispensatory, and Hippocrates's Aphorisms, or any similar technical books.

As parents can seldom be competent judges of the abilities of practitioners, it may be advisable to procure the recommendation of some medical friend.

Unless such a master be himself a scholar, he can scarcely form a proper judgment of the qualifications of a pupil, much less invite a retention of school-learning, or encourage proficiency : except a practitioner have served a regular apprenticeship himself, he cannot be so well qualified to conduct an apprentice through every gradual advancement necessary ; unless he be in full business, and his practice successful, the time of a youth may be unoccupied, and the recommendation of a master be eventually useless.

In the selection of a master it is no less essential that he should be renowned for his integrity ; and a strict regard for the honour of his profession.

It might be very pernicious to a young man, if

the interval between leaving school, and commencing an apprenticeship were of long continuance; for at the time of adolescence the disposition will be active, and, by the partial indulgence of parents, a propensity to idle, or bad habits may be easily acquired.—During such vacation a sedulous parent may expatiate on the charges already incurred, and those to be expected in procuring a suitable education, the advantage of turning such opportunities to profit, and the unavoidable disgrace, that must be the consequence of indolence, or want of application. Economy in dress, or other trifles, may be urged, by pleading the use of expending the money in more lasting professional attainments.

The choice of proper companions may be another fit topic at such a season; since a particular kind once preferred, however erroneous the choice may have been, will be afterwards with difficulty changed. The nature of the profession demands a grave deportment, and the exigencies of it oblige young men to submit to greater confinement, than is required in other apprenticeships.

The secrecy, and sympathy requisite in this profession, and the company, to which practi-  
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ners are generally introduced, should be looked forward to, in electing suitable companions. The conclusion of an Apprenticeship should be suited to the commencement of sequent studies.

### Section the Fourteenth.

SINCE the acquirements obtained during an Apprenticeship are of great consequence towards subsequent attainments, parents ought to be very scrupulous in their selection of masters of known abilities, and good morals. The profession is liberal, ornamental, and useful, if those who follow it have sound learning, solid judgment, and steady principles. Every youth, before, or at the time of admission as an Apprentice, should be approved as a Latin scholar, since he cannot otherwise prosecute the usual business immediately required.

Reformation in medical science is most likely to accrue, from a strict regard being paid to regularity in the education, and qualifications of young men, before they commence practice. The support, countenance, and exemplary conduct of dignified, judicious, and experienced professors of the art cannot fail to have great influence, in exciting an active prosecution of studies, a diligent application in masters, and a ge-

neral zeal for improvements in the science. There are among the Gentlemen, who are members of the very respectable Societies, the Royal College of Physicians, the Corporation of Surgeons, and incorporated Company of Apothecaries, many eminent characters, distinguished for their celebrity in each branch of the profession, required to be studied by those country practitioners, who are unavoidably obliged to follow the separate provinces collectively.

A plain, easy, and methodical manner of conveying instruction, a cautious regard to propriety and consistency, in regulations for conducting the progressive steps of education, and rules for determining the suitable qualifications for practitioners, in every distinct department, are essentials in their custody, under their management, and subject to their controul. As far as any propositions contained in the sequel may coincide with their approbation, or any restrictions meet their ideas, I humbly, and with due deference, entreat their sanction; being fully conscious, that the hints of a recluse individual can avail little, unless patronized by the sagacious interference, and salutary encouragement of more elevated characters.

Those practitioners, who have been entitled to



real fame, or deserved imitation, have been no less distinguished for literary acquirements, than professional talents. If literature be deemed a necessary prelude to the attainment of professional skill, then the necessity of instituting suitable regulations, for the discrimination of such a requisite superstructure must be obvious; and the examination proposed in the third chapter appears to be a suitable injunction.

## CHAPTER THE SECOND.

### *On a Medical Apprenticeship.*

#### Section the Fifteenth.

**A**LTHOUGH a Master and an Apprentice may have, in a great measure, approved of each other, yet before a covenant between them be finally concluded, a little time is usually allowed, for a trial how they may accord in their dispositions towards each other.

The sum to be paid as an apprentice-fee is ordinarily a principal question. With an assiduous, well informed, and tractable pupil, the sum may be comparatively of much less signification; while no money can compensate for the loss sustained, or the inconveniencies resulting from an

illiterate, indolent, and unmanageable apprentice. The recompence must depend on such a variety of circumstances, that a proper sum cannot be stated, but must be left to the discretion of the parties. Not only a reasonable compensation for defraying the costs of board, but something for instruction may be expected, by those masters, who make a point of attending to the application, and proficiency of their pupils. It is always desirable, that an apprentice should board with a master, or parent, and the latter should engage to co-operate with the former, in urging a pupil's conformity with the stated regulations of a family.

It must be admitted, that the elements of a science appear to youth embarrassing, but in proportion as the rudiments can be simplified, and a pupil become an opificer himself, he is rendered more sensible of his proficiency, and he is sooner fundamentally improved, besides his advances are easier, and more gratifying, as well as amusing. Strenuous application in a student cannot fail to prompt sedulousness in a preceptor; especially if he be constantly supplied with the aid of a parent. The romantic notions of young men are apt to lead them on to imprudent sallies, tempting them to exceed rational, or justifiable bounds, unless they be fully engaged in professional em-



ployments. By the constant ingenuity and attention of a vigilant practitioner, an apprentice may be kept engaged in useful, and instructive amusements, and few pupils will be indolent, or intractable, when their instructors are vigilant in promoting their proficiency.—It is no less the interest of a master, than that of an apprentice, for him to be quickly initiated, and early informed, for him to act with certainty, instead of conjecture, with security instead of hazard.—When an apprentice has not proper guidances to conduct him in such important employment, blame cannot justly be imputed to him, though errors be discovered, needless charges incurred, and patients be dissatisfied.

### Section the Sixteenth.

AN Indenture is an established form, rendered by a late Act of Parliament a test of a *regular* education, or a distinction from illiterate intruders; for every medical dispenser of medicines, who has not served a *regular* apprenticeship, is, by the Act considered, as an empiric; and every medicine he may vend is subjected to a stamp duty, besides the vender being obligated to take out a licence.

By the words *regular apprenticeship* being left

undefined, either by that, or preceding Acts, there is no fixed rule for parents, or masters to decide on the proper term of a regular apprenticeship. In parish apprenticeships seven years have been esteemed to be the period, or until the apprentice might arrive at a certain determinate age, but if such rule were to be adopted in medical apprenticeships, pupils would not have sufficient time for school-learning, or to prosecute subsequent studies, at an age generally allotted for such purposes.

The confusion occasioned by this ambiguous expression is not confined to regular practitioners; for it gives latitude to evasions of the Act by Quacks who, if doing the most mischief be a reason for the restrictions on them being more enforced, ought at least to be made equal contributors to the tax.

Although it has evidently been the design of legislators to serve, and encourage well disciplined practitioners, by taxing such as have not a liberal education, yet the intention is defeated, for want of an explicit definition of the term of a medical apprenticeship. I have heard of Counsel having been consulted, without having pointed out any fixed rule, for a certain plan of procedure, hence it behoves the Guardians of the Pro-



feſſion to apply for a leſs equivocal diſcrimination. An unſettled notion, reſpecting the implication of the word *regular*, invalidates the authority of many indentures, leaves an uſeful diſtinction indeterminate, countenances evaſive contrivances, and diminſhes the Revenue, if not renders an important covenant uſeleſs.—Many parents bind their ſons for three or four years, others inſert a term of ſeven years, with a reſerve, or option to diſcontinue the ſervice at an earlier period.

It is certainly of moment, that every regular, and well educated ſtudent ſhould be properly indentured, and be freed from any diſputable contraverſion, or degrading prevarication.—Many practitioners bring up their ſons to the profeſſion, and are doubly intereſted in ſuch doubts, being removed.

A Youth cannot hereafter poſſeſs a legal teſtimonial of a regular education, unleſs not only the requiſite term be ſerved, but the fee paid be unequivocally recited, and the tax, according to the ſum paid, be timely ſettled.—When an apprentice is a relation, the neceſſary indenture ſhould be with equal regularity framed; for what compensation can be made to a young practitioner for the ſtigma, that may accompany neglect? Such a deed ſhould alſo contain a full account of

the expectations of each party, in order to exclude disputation and preserve harmony.—It might perhaps be useful, if such covenants were read over, in the presence of all the parties, every year, and any encroachments then observed might be seasonably adverted to, and remedied. It is not unworthy of observation, that all the three parties, commonly inserted in such covenants, are equally concerned, in the compact being fulfilled, and a failure in any one affects the whole.

An apprentice cannot reap the intended advantages, unless his application be exerted ; a master cannot expect his apprentice to be early initiated, and his services valuable, unless pains be taken to point out to him the necessary steps for his improvement ; nor can the ends proposed by the parent be obtained, except he lend his assistance in exacting compliance, and precluding misbehaviour on the part of his son.

### Section the Seventeenth.

As a Practitioner has commonly many engagements from home, there becomes a greater necessity for an apprentice to be early, and thoroughly qualified to act in his master's absence.—Since a young apprentice may often receive con-



considerable instruction from the help of a senior assistant, as well as from a preceptor, that friendly advice, and aid should be thankfully accepted. Professional exercises are the main objects for students, who have for a time much leisure; few are injured by too close application, many are tardy in gaining proficiency from not having methodical rules to follow.--A candid inquiry into the manner, in which the practice in every department is conducted, may manifest a want of method, yet this is the very life and spirit of business. Every master is rewarded for the instruction of his apprentice, either by fee, or services, and most of them take apprentices, hence a practitioner should be, in general, considered as a teacher.

The arrangements, to which an experienced Apothecary may have been long accustomed, may appear adequate to his own wants; without his reflecting, how imperfectly they have been adapted to the capacities of pupils under his instruction, and consequently ill suited for his own advantage. All contrivances for expediting the initiation of apprentices should be plain, and easy to be comprehended, as well as preparatory to more arduous attainments. The more a youth can be invited to ingenuity and proficiency, the

more useful his exercises will be. Should any one conversant with all the avenues leading to a distant place be desirous of enabling another person to find out the nearest road, would he think a general view, or a superficial description a sufficient guidance? Would he not rather particularize the whole track necessary to be pursued upon a correct map, enumerating specifically all the principal towns, and villages, to be passed through; remarking on their distinct bearings, whether East, West, North, or South, and reminding the inexperienced, but inquisitive traveller, of the danger of mistaking his way? The ultimate intentions of such a wayfarer might be a rule for governing his procedure; were the main design a speedy termination of his journey, he would naturally prefer travelling post haste; but if the drift of this excursion were to make observations on the particular soils, and minerals, and to become familiarly acquainted with each place, the length of time requisite for completing his expedition would be disregarded. Thus, when a young apprentice is intrusted with the care of a Dispensary, unless his employment be set in order, and minutely explained by an experienced master, a young man must be long bewildered, and subjected to great perplexity, but if such re-



gulations be framed, as to enable him to transcribe, and renew the whole plan, he feels himself gradually gaining information, and is encouraged to think himself equal to the task that he has undertaken.

### Section the Eighteenth.

THE Pharmacopœia is the primary book necessary to be studied by a young apprentice, by this he may learn the weights, and measures, the characters in length, of labels which, in the shop, are usually abridged; and an explanation of formulæ commonly met with in prescriptions. In ascertaining this useful information, great benefit may be derived by the instructive comments of a master or competent associate. A familiar acquaintance with the contents of a dispensatory may teach a youth to explore the meaning of the abbreviated titles in the shop, by comparing them with the words at length. Experiments of this kind may lead on to his remembrance of the places destined for different articles, a knowledge which he will find to be absolutely necessary, when he has to select various ingredients for medicines, directed to be by him compounded. In proportion to the multiplicity of business trans-

acted, the number of articles is ordinarily increased, and in many instances amounts to four or five hundred. It must be a long time before a young man with the best memory, can retain the exact place of any considerable number of the contents in a shop, unless he have some established regulation to assist his recollection, and expedite his search. In the chapter on the arrangement of an Apothecary's shop, an apprentice may find a method of furnishing himself with rules for his framing his own guidance, or copying that form already contrived by an ingenious instructor. I have for several years experienced the refitting, or renewing the titles of a Dispensary to be preferable, to any other mode of initiating a young apprentice, nor have I ever found a difficulty in a satisfactory recommendation of such a profitable lesson.

Coloured papers instead of painted labels are particularly advisable, because they are well fitted for occasional changes of obsolete to significant titles, and also for admitting of a frequent and thorough renovation of a whole shop, and at a trifling expence. Should a master object to the charge, a parent would always find the defraying of it fully compensated by his son's improvement. There is nothing proposed in executing such a



scheme, that is out of the reach of any youth, who has had a proper education, the whole is practicable, and in proportion to the difficulty the exercise will be found permanently instructive.

An apprentice engaged in this renewal of titles should proceed with caution, should aim at gaining a knowledge of each appellation, and occasionally consult an experienced guide. The last edition of the London Pharmacopœia, and a Latin Dictionary may be found essential aids. It is to be taken for granted, that the most alert juvenile performers will be liable to mistakes, and that the superintendence of some quick-sighted preceptors will be absolutely necessary; and such requisite corrections may also afford an able master an opportunity of expatiating on the necessity and utility of such performances. For the credit of practitioners, as well as pupils, and for the satisfaction of employers, a scrupulous nicety in the cleanliness of shops must be obvious.

### Section the Nineteenth.

ALTHOUGH an apprentice may reap considerable advantage from completing a renovation of a Dispensary, yet he will still find his searches for particular articles somewhat difficult; and capable of being facilitated, by providing an exact

reference to the place of all the contents throughout the shop. If such a table has been already formed, the copying of it will be found extremely useful, but if not, a plan of such a form will be met with in the sequel of the same chapter, and will be proper to be adopted. Neatness, cleanliness, and accuracy can alone render such an alphabetical reference, a beneficial and exact guidance, for unless the lines be strictly opposite, the directions must be erroneous. Emendations in this Formula may be no less indispensable, than in the several titles already finished.

Upon the coincidence of the arrangement, and the reference table, the benefits to be derived must wholly depend. The most useful employment for initiating a compounder of medicines is an examination of the conformity of these connected parts of the plan ; for by repeated researches, not only any existing errors will be discovered, but the memory, as to the place of each of the materials, will be so improved, that an apprentice will have little difficulty in recurring to an article, however seldom it may be in use.

### Section the Twentieth.

AN apprentice who has, by his own ingenuity,



thus methodized his shop, will have a greater pleasure in preserving order, and preventing any thing being misplaced. The proposed variety in each partition, and the exact numbering of each article cannot but remind him of the incongruity ensuing from any irregularity. Although a careless disposal of the contents, a similarity of titles, or a semblance of substances might mislead an immethodical youth ; yet an apprentice, who has, by his own handicraft, rendered every appellation familiar to his recollection, and whose scruples have been cautiously removed, will be much more likely to gain general improvement, and to be more safely trusted. After a knowledge of the various articles in a Dispensary has been satisfactorily obtained, the proper regulations to be observed in compounding medicines must be learned.

The original prescription should be diligently read over, and unerringly comprehended, or any doubts clearly satisfied ; it should always be placed in view, not only during the compounding of any medicine, but also until the directions be written, and every thing that has been executed be carefully supervised. On each label should be subjoined the date. When a medicine is repeated, the date of the original prescription may be preferable as a guidance to the compounder ;

when a farther repetition may be required, then the same aid may be procured by a similar rule in the day-book.

A medicine should never be verbally prescribed, except it be immediately entered, and read over by the transcriber to the person who dictated the formula; nor should any compounder proceed, without knowing with certainty, that the medicine selected be agreeable to that in request. An apprentice cannot be blameable for mistakes arising from the prescriptions of a Physician, or from a Day-book being unintelligible, unless he have neglected opportunities of procuring an explanation.

The memory, and aptness of an intelligent Apothecary, and the imperfect talents of a juvenile assistant are so widely different, that it must be absurd to suppose, that no further regulations can be necessary for an undisciplined Apprentice, than an experienced master.

The importance of a medicine being faithfully compounded, and unerringly labelled; the multifarious ingredients often included in a medicinal mixture; the danger from one substance being mistaken for another, or the risk of inefficacy from essential omissions; the chance of a misno-



mer, or an inaccuracy in explaining the directions ; the unavoidable absence, together with the unexceptionable responsibility of a Practitioner for the acts of his deputies ; the consequential reliance usually reposed in juvenile compounders ; and the difficulty of regaining credit after the slightest deviations in a composition have been detected by an invalid, may be urged as cogent arguments in favour of superabundant accuracy.

### Section the Twenty-First.

THE satisfaction resulting not only to Pupils, but Teachers, from adopting such methodical regulations, can scarcely be conceived by those, who have not resolution to give them a trial. I am aware, that many are inclined to think, that young men are too intractable to bestow the pains required ; unmindful that much trouble, labour, and anxiety are by such regularity precluded. The gratifying pleasure parents may receive from a communication of growing improvement being sensibly imbibed, in the early part of an apprenticeship, may be argued, as a farther recommendation of such established forms.

The consolation patients may feel in knowing, that their medicines are scrupulously, and exactly compounded, and that every precaution is taken

to prevent mistakes, and remove any hazard, that might otherwise originate from confiding in less experienced Assistants, is no less worthy of observation.

### Section the Twenty-Second.

THE sooner a Pupil is qualified to manage the business of a Shop, the more vacant time he will have for prosecuting further attainments. The copying of prescriptions into the Day-Book is an employment requiring great exactness, and therefore what is written should always be read over and compared, besides the necessity of carefully examining that every Entry be made.

The form of the Day-book, and also of the Ledger, will be particularized in a future Section. By regular and exact entries, as well as original dates, business may be more expeditiously and accurately managed: and if these two books be well connected, a medicine may, at any distant period, be indubitably discovered.

The business of a Laboratory, or the inspection of chemical preparations, may sometimes engross the attention of an Apprentice; but such opportunities are generally very limited; a young man can hardly avoid imbibing a curiosity for becom-



ing further acquainted with the articles in a shop, when he has perfectly ascertained all their names, and been employed in compounding prescriptions. His leisure may be advantageously occupied, in having recourse to books on the *Materia Medica*, by which a farther knowledge of things in his custody may be gradually collected. He may observe, that some articles are the produce of our own, some of other Countries : he may compare the drugs in the shop with the descriptions given of them, and examine whether they appear to be genuine, or adulterated ; he may learn the poisonous efficacy of some preparations, when compared with the mildness of others, and he may find that some of the contents have been found antidotes to the violent effects of others, while such intelligence may prompt caution.

### Section the Twenty-Third.

MUCH more information may be gained by stated periods being fixed for particular business. It is justly observed by Mr. Locke, that nothing so much clears a learner's way as a good Method, hence it is of the utmost consequence that Professional Students be early trained in the elementary parts of the Science, and that they be constantly employed in acquiring Proficiency.

When an Apprentice can be prevailed on to see the permanent benefits of a studious application, a Master must have a pleasure, in searching out continual supplies for his Improvement.

Early rising, especially in Summer, is not only salutary, but is the most seasonable time for studious exertions; the thoughts being least encumbered, and interruptions least likely to happen.

An Apprentice should have his Shop made clean, and put in order, and himself neat in his dress, before the usual hour of breakfast. Moderation in the imitation of fashions ought to be regarded; negligence and foppishness should be equally shunned; sudden calls forbid carelessness, and sedateness of Character being requisite should prohibit fantastical Apparel.

After breakfast he may examine, if any Articles throughout the Shop be wanted, and under the direction of his Master furnish supplies; or make ready any preparations for dispatching expected business.

Whatever additional trouble may accrue to himself, such Medicines as are more immediately wanted, should be first finished, and conveyed to the Patient. Even the previous preparation of Labels, Bottles, and such like materials may



greatly expedite business, and nothing, however trivial, ought to be omitted, that may hasten the relief of those in distress. It will be expedient to be cautious, in entering every Medicine dispensed, otherwise a Master may sustain considerable loss. Punctuality in the observance of every regulation in the Family is advisable, for preserving general esteem.

The important Articles, under the management of an Apprentice, render great circumspection necessary; and the mischief, that might arise from secrets in business being inadvertently communicated to gay connexions, call for great care in the choice of Associates. The confidence of Invalids cannot be preserved, without some dependence can be had on the steady conduct of Practitioners, and their Assistants.

The entering, and delivery of Messages may be essential, as well as suitable demeanour, and propriety in the return of Answers, considering how much the interest of a Master is therein concerned. The impropriety of unnecessarily mixing with Servants, or preferring their company, may be to Youth an useful caution.

To obtain a moderate share of knowledge during an Apprenticeship, much application will be required, hence time should not be wasted in pe-

rufing uninftructive, or prejudicial Books, but the principal ftudy fhould be Professional Attainments. The Science affords an endless fource of entertaining Inquiry. A Mafter, or Parent can generally mention a profitable Author worthy of being confulted.

Late hours are neither conducive to health, nor advifable, becaufe little Improvement is then obtained, and the habit is apt to interrupt timely rifing.

When a Student has by affiduity furmounted all the attainments within the province of the Apothecary, he muft not forget, that he has alfo to aim at gaining all the information he can in the furgical department; and here he may be led to regard the benefit of contriving forms for the preferving, and fearching out, or collecting, fets of paffive implements.

### Section the Twenty-Fourth.

FEW arguments have been offered to invite the Student to exercife himfelf in framing and comprehending pharmaceutical arrangements, that may not be urged in favour of furgical forms being with equal energy performed. So unforefeen are many of the calls for a Surgeon's affif-



ance, that a Practitioner ought always to have his instruments in good repair, and easy to be selected. In a hurry of business a Principal may find great convenience in his Assistant being acquainted with the names, and the places of all the implements, and having a guidance for chusing out any set of instruments, that a Surgeon may, in his absence, wish to be sent for his immediate use.

The form of arrangement for the instruments, with a Table of reference; together with forms of apparatus, and procinct, will be found in succeeding Chapters, calculated for the information of an Operator, and his Pupil.

By a careful transcript of each of these forms, an Apprenticc can scarcely fail to ascertain the names, or to acquire some knowledge of numerous instruments: and he will naturally become inquisitive as to the manner of using them. Such information will not only qualify him for selecting an apparatus, or procinct, but for giving greater assistance at the time of operating, and forming a better judgment of the intention of an Operator.

It may be advisable to point out to Students the propriety of having a form of apparatus, and procinct for a Luxation, or a Fracture, as exact

as that for any capital Operation; and to remind them, that procincts are often in a great degree left for Pupils to provide, hence the division of the two forms, and a particular attention to the latter, may be requisite. Not only a Surgeon would feel remorse at an omission of any article, that was found necessary during an Operation, but an Assistant, who had been relied on, would certainly share in the anxiety. So far from such provisionary measures creating a fondness for Operations, they ought rather to shew, that success depends not merely on dexterity, but regular proceeding.

By an anticipation of such forms the mind being unburthened of a requisite hasty collection of instruments, and necessaries, must be more at liberty for other important considerations. It is not amiss, in the table of instruments, to have a column of reference to some principal author, or inventor, as it may prompt pupils to search out for more general hints, on any subject under discussion; and may gradually lead them to inquire into the maladies, for which operations are commonly recommended.



## Section the Twenty-Fifth.

THE arrangements, capable of being contrived for passive implements, may suggest the use of taking a review of diseases and their treatment, and by selecting the best opinions on each, facilitate, and expedite safe determinations, and approved modes of procedure. Although an apprentice may not be able to make any considerable advancement in such observations, yet the form of considerations in the sequel may give him a notion of attempting such a performance, and invite him to a more perfect plan, when by subsequent Studies he may become qualified to add more instructive comments.

On the preparation for operations, and on the manner of performing them, together with the subsequent treatment, his thoughts can hardly fail to be occasionally diverted, during the recited investigation ; and perhaps some opportunities may occur of confirming them by remarks on practical cases, especially if he should have the benefit of attending an Infirmary.

A principal use that may be expected, from a Pupil's time being occupied in professional inquiries, may be his superior abilities to pass an examination, that ought to be required as an in-

troductiō to subsequent studies, after the termination of an apprenticeship, and in this preparation, an intelligent master may afford considerable assistance.

### Section the Twenty-Sixth.

AN apprentice, who thus considers his future prosperity, by looking forward to credit as a practitioner, will see the necessity of being unimpeachable in his morals, frugal of his time, economical of his money, and dutiful to his Parents, as well as respectful to his master. He will despise all deceptions, or indirect practices, and veracity will be his invariable rule. There are, interwoven with the diseases of mankind, so many frailties, that a negligent disclosure, or an unfeeling communication of the kind of indisposition, might often involve a disrespect or injury to a trusty invalid; and as assistants are sometimes necessarily intrusted with family concerns, they should never lose sight of the promise, made in their Indenture, to keep their master's secrets. Greater caution may be requisite, because an apprentice may not be able to judge of the bad consequences of betraying circumstances apparently trivial. As the Day-Book contains names and medicines of all his master's patients, an appren-



tice should be careful not to expose that book to any inquisitive visiter.

There may however be communications, with secrecy enjoined, the revealing of which to a master may be a duty ; as well as necessary, to prevent becoming accessary to a crime. When medicines are applied for, and requested to be dispensed, without the knowledge of a master, and perhaps avowedly for a sinister purpose, not any importunity should prevail, even to secrete the application.

As any concealment might prove a source of unhappiness, and subject a youth, even at a distant period, to censure, if not punishment, the naked truth should never be disguised, or withholden from a confidential master.

### Section the Twenty-Seventh.

A studious apprentice will sooner acquire a serene disposition, and a steady countenance, qualities that will give him an earlier opportunity of displaying his abilities in practice, and being ushered into favour with his master's employers. A patient labouring under great pain, or alarm, and unable to procure speedier relief, may receive some consolation, from the pertinent observations, and salutary advice of a well informed

pupil, to be supposed not altogether unacquainted with the prescriptions of his preceptor on similar occasions. In a case of great danger, a pupil would be anxious to procure superior counsel, yet would be cautious, to whom he communicated unpropitious omens, while favourable appearances would be cheerfully intimated. There are many little offices, ungainly performed by ignorant nurses, or unfeeling hirelings, in which an attentive apprentice may render himself highly serviceable. The dressing of a blister with care, and tenderness, or the administering of an *Ænema* with ease and cleanliness, may gain lasting confidence. If a pupil should have to bleed a patient, set an issue, or seton, he will not fail to turn to advantage the forms, with which he is already acquainted. The examination required previous to frequent studies should be prepared for, and a master's advice may also be required in the choice of Professors, as future teachers. When an apprentice has diligently served, he must be entitled to a certificate of his good behaviour.



## CHAPTER THE THIRD.

### *On Examinations for Students and Practitioners.*

#### Section the Twenty-Eighth.

Nothing would more effectually awaken the diligence of parents, of practitioners, of pupils, than the establishment of suitable examinations, at stated periods. If it be granted, that classical learning is a necessary qualification for an apprentice; that proficiency in apprenticeship is a necessary prelude to subsequent studies; and that such a progress in professional attainments is required to practise in any branch of the science; may it not be fairly inferred, that none of the accomplishments should be left to chance; or that such, as have no pretensions to these essential requisitions, should be conspicuously discriminated? Except there be some appointed check to these irregularities in the different stages of education, there will be illiterate intruders and ignorant practisers. Were every regular practitioner furnished with impartial tests of his proficiency as a student, and an

approved licence to practise in each province, that he professed to act; and every pretender were obligated to bear some emblem of his disqualification, the Public might be less imposed on, and the revenue might be augmented.

An able Writer has remarked, that the want of strict examinations will gradually render this once deservedly honoured Profession low, and contemptible. If attestations of talents were known to be unbiassed tokens of merit, the zeal of jealous Students would be excited, and the competition of Teachers be stimulated. In proportion as the institution of examinations were opposed by the ignorant, and the lazy, it ought to be countenanced, and encouraged by well disciplined Pupils, and sedulous Practitioners. It is not proposed, that any of the tests should be arduous, but that every proper indulgence should be shewn to those Pupils, who were pursuing a regular course of studies, and exerting their best endeavours.

It is in the early part of education, that the abilities of Students should be examined, since a defect at such a time may preclude necessary acquirements as a licence to practise.

If distinguishing tokens of studious proficiency, and suitable qualifications were by law required, Practitioners would be more cautious in their ad-



mission of Apprentices, and Parents would strive more to have their Sons well educated; while Lecturers, and Surgeons at Hospitals, would be more scrupulous as to the previous attainments of their Pupils.

When Testimonials are unreservedly bestowed, when all sorts of Students can gain admission, and share in marks of honour, the spur to useful exertions is blunted, and the very essence of necessary qualification is effaced. Immethodical Students are apt to desert regular practice, and disgracefully imitate Empirics; experiencing inability they are anxious to conceal their ignorance. The encouragement of Pretenders diminishes the number of regular Students.

It is usual for every Physician to have a Diploma, and many who practise Surgery, even in the Country, have a similar test of Approbation. All Practitioners in the Army and Navy, are obligated to pass an examination, to the satisfaction of legal Judges. No Medical Man is allowed to have the care of Negroes, until he be lawfully approved: nor any Guinea ship to leave an English Port without an examined Surgeon. In addition, the Legislature has commanded every Vender of medicines, not having served a *regular apprenticeship* to take out a licence and to put a stamp on

each medicine, as has been already mentioned in the Section on Indenture. If this Act were not in many instances evaded, the Community might be warned of the disqualification of itinerant, and illiberal Quacks. In the Metropolis a Practitioner is required to pass an established examination, in every branch of the science he professes to follow, besides being under the controul of delegated Censors, and the watchful inspection of Guardians of the profession.

Is it not to be wondered, that Practitioners, who conjointly, and remote from the seat of Legislation profess all the several branches in the science, should be permitted to practise unmolestedly, without any inquiry into their qualifications? Is it that the Practitioners, who are necessitated to be approved, are no better qualified; or that the humane protection of the Natives of our own Island do not equally merit legislative care, and caution with Africans?

The fatal mischiefs ensuing from a want of such jurisdiction frequently remain unexplored, but an investigation of them would be truly philanthropic, as it might tend to produce useful restrictions.

Men in servile offices are not unfrequently employed by Apothecaries as Compounders of me-



dicines; illiterate young men are admitted as their apprentices, and those, who have the care of subsequent studies are too apt to permit a promiscuous reception of disciplined, and unlettered pupils. When empirics dispense medicines for sinister purposes, or when their packets prove deleterious, too much lenity is generally shewn; partly to be imputed to the credit, and general preference given to quackery.

When parents neglect to promote application in students; when regular professors of the art fail to preserve a proper distinction of due qualifications, no wonder that liberal education, and regularity in practice want proper encouragement. An indiscriminate grant of commendatory testimonials may be esteemed, by diligent, and well-educated pupils, an humiliating disparagement. We cannot trace the requisite qualifications of a Surgeon-apothecary, without a full conviction of the necessity of his possessing real, not feigned abilities.

The health of our fellow-creatures, nay their lives are concerned, in such practitioner's being duly qualified. The intricacy of disorders, the penetration required to discern the variations in Diagnostics, and the selection of remedies demand more than ordinary skill. Invalids cannot

judge of professional qualifications, but require some scrutiny having been made by professional judges.

The sole care of a patient frequently devolves on an apothecary; a surgeon is often intrusted with the management of important cases; but above all the practice of an accouchuer exceeds the rest in consequence, and humanity urges some prior approbation of such practitioners' being deemed obligatory. If literature and regular education lead to improvements in science; if the inhabitants of this Country suffer from the ignorance of pretenders, some remedy should be studied.

### Section the Twenty-Ninth.

THE periods that appear to me proper for such examinations, are about the time of finishing school-learning, by way of admission to an apprenticeship; a second inquiry at the conclusion of that term, as a necessary introduction to those, who give subsequent instruction; a third at the termination of studies, as a licence to practise; and a fourth, if at any future time a practitioner should change his rank in the profession. A review of the qualifications evidently requisite for an apprentice must shew how much the security of



invalids depends on their reality. That proficiency during an apprenticeship may facilitate subsequent improvement will scarce be disputed. The third examination ought certainly to be in each distinct branch intended to be practised; and it need not be farther insisted on, that the danger must be great in trusting such important business to unqualified, and unapproved practisers, or tuition to untaught pretenders.

As a practitioner of great experience may render himself useful as a consulter in one department, when he finds himself unable to bear the accustomed fatigue of general business, there should be a diploma instituted on such occasions.

An alphabetical catalogue of every regular practitioner, with a reference to the particular provinces, in which he had been examined, should be registered at some fixed general office. In order that each approved practitioner might be more fully and clearly distinguished, the same office should be empowered to collect an exact list of all Irregulars, who should be with equal strictness discriminated.

The College of Physicians, the Corporation of Surgeons, the Licentiates in Midwifery, and the Company of Apothecaries would be satisfactory judges, and might if occasion required ap-

point deputies among the physicians, and surgeons of Infirmaries, or other public professional offices, as is already done for the examination of surgeons to African ships.

The respectable Societies have been instituted for the guardianship of the Profession, and any plan, that involved the good of the Community, would no doubt meet with the support of Parliament.

The usual manner of examination is by questions being proposed, but it seems to be worth inquiry whether a written composition might not on some occasions be as useful in finding out the abilities especially of diffident students.

In examining Scholars in Divinity for an exhibition at Queen's College, Oxford, the examiners fix on subjects, as *Theses* for compositions, to be performed in an adjacent room: and these are received as tests of ability.

Young Men have commonly been more in the habit of making themes, and writing their studious performances, than in replying to interrogatories, besides great benefit might accrue from such exercises being habitual.

Examiners might have it in their power to do more than demand necessary exercises, they might include commendation, or reproof. Want of



application would occur more frequently, than want of capacity, which might suggest suitable advice.

Medical prizes have ordinarily been confined to practitioners, but there would be no impropriety in extending them to one, or more students, of that year, who might excel in the course of such examinations. By emulative competition being roused, no talents would be untried, and assiduity would be rewarded. Those who took the best degrees would have a just claim to preference, as Army or Navy surgeons, or to any Medical Offices in the disposal of the Public. There is not sufficient regard paid to preferring regular practitioners, as Deputy military surgeons, as surgeons, for examining recruits, or for giving in Reports at Coroner's inquests.

## CHAPTER THE FOURTH.

### *On Studies subsequent to Apprenticeship.*

#### Section the Thirtieth.

ALTHOUGH the termination of an apprenticeship has been advised to be, about the time of subsequent studies beginning, yet there will be generally some interval. The retention of the dead languages, the preparation for Lectures, a communication with professional men, drawing, learning the French language, or short-hand may be enumerated for a student's selection.

If a preference be given to music, or other amusements unconnected with the art, there may be danger of their permanent interference with essential studies.

The advice of parents should be listened to, and a resolution should be formed, to be economical in all other expences, that not any beneficial study may be unattained, for want of being able to defray the charge.



Parents should insist on young men, who must now become in a greater measure their own masters, keeping up a correspondence, and giving some account of their employments. When a parent cannot introduce his son to Professors, it may be useful for him to be accompanied by some sedate acquaintance.

### Section the Thirty-First.

FROM Professors, endued with a greater degree of learning, experience, and the art of conveying instruction, and placed in eminent stations, a cautious regard to regularity, and to proper distinction in pupils may be reasonably expected. It cannot be pleasant for men of Science to impart intelligence, when there can be little prospect of any benefit being derived by those under tuition, besides the promiscuous admission of unlettered men with such as are well qualified must be degrading. I have known lecturers, who, on finding students deficient in preparatory learning, have, by warning parents of the inconveniencies, procured proper masters for them, with their own approbation.

At the Infirmary, which I attended from its institution for near thirty years, the surgeons refused the admission of all pupils, that did not ap-

pear to be in a course of regular training. My own apprentices were required to be classical scholars, and I never suffered any servile person to compound medicines, or at any time consulted with irregulars, or pretenders to the Art. Young men, who are at a great expence in their education seem to have a claim on their masters' discountenancing all irregularities.

London and Edinburgh seem to be, at present, the principal Seats of medical learning; and although Edinburgh be more chosen by those intended for the practice of medicine, yet such as mean to follow the several branches more frequently prefer London. Few English students visit Foreign Universities.

The advantages of Edinburgh seem to result from its regular College, where studies are conducted on an extensive scale, and methodical basis, hence it may be more commodious for the physician, than for the surgeon-apothecary, whose time is more limited. The well-known and justly admired celebrity of the Professors, the opportunities that are given to students, of attending clinical lectures, and the benefit of having books, from a copious collection of well selected authors, must be worthy of attention.



In London the emulation of each Professor may be roused by the numbers in all the several branches of the Science. The unrivalled advantages of studying anatomy, and the extensive practice of many hospitals afford scope for pupils in search of universal knowledge in the art. Although rivals in professorships may always have a name, yet the whole art is in a great measure taught at some of the principal hospitals.

The expences of professional teachers do not, as far as I can learn, materially differ; but it is better for such charges to be kept distinctly from common expences, in order that each may be clearly ascertained. When a student purposes attending both seminaries, some have advised the lectures in London to precede those at Edinburgh, but I should rather incline to think that the attendance ought to be reversed.

### Section the Thirty-Second.

A Professor, who is punctual in attending at the hour fixed, can better expect regularity in his pupils; and one who supports a proper dignity, commands respect, and precludes unbecoming freedom. On a constant attendance, and on its exactness, the certificate, usually given, should depend, hence some method of determining the

absentees should be contrived. Since some Professors have acknowledged difficulty in pressing tests of proficiency, it behoves parents to urge compliance, for however irksome such improvement may, at the moment, appear, subsequent advantage will ensure a succeeding approbation.

Since the calls to an hospital may be urgent, the choice of a habitation should be suited to such attendance, rather than to that on the Lecture-rooms. If a student could be accommodated in a creditable Family, he might, now and then, find the fatigue of study relieved by the cheerfulness of domestic society.

The studies required to qualify a Surgeon-Apothecary are numerous and costly; hence a Pupil has no time to waste on amusements; if not before, when a Practitioner, he would become sensible of the loss sustained by having neglected any of them; and if the expences of subsequent studies have not been previously considered, they may exceed expectation or convenience. Except a Student has a taste for the Profession, and prefers it to other pursuits, he will find it difficult, to attain a sufficient stock of knowledge for gaining subsequent proficiency, or creditable success, as a Practitioner. Could Pupils be timely appri-



zed of the future gratification, and permanent advantages, resulting from elementary acquirements; or the difficulties, that must ensue from ignorance in practice, or in stemming the opposition of envious Competitors; they would seldom neglect the present irrevocable opportunities, of imbibing fundamental knowledge, and qualifying themselves for practising with success and credit. Some studies may be deemed elementary, and a sort of superstructure; and if a proper choice be made, as to one preceding another, each may be rendered illustrative to the other. A Pupil has not time for prosecuting any branch of study separately, hence it seems most advisable to begin with the rudimental branches, and the rule, I was told at Glasgow, was to recommend not more than two studies to accompany each other at the commencement, which appears to be well calculated for a Pupil to ascertain with clearness the elements.

In the selection of accompanying studies, some regard must be had to the season of the year, and in summer the length of days may render a greater number less fatiguing. The association of one diligent Student with another may be turned to considerable advantage, in searching out instruction, or recalling to mind remarks, which

had escaped the observation, or recollection of an individual. An indolent associate may not only neglect his own improvement, but materially impede the progress of an intimate. The perusal of books, on a subject to be discussed by a Professor, or by way of impressing on the memory of a Student, a Lecture lately heard, may usefully occupy a Pupil's leisure. If a Pupil can quickly write short-hand, he may, during lecture, record the principal heads for his future more general remarks.

The two fundamental studies appear to be Anatomy and the Materia Medica. These may be succeeded by studying the theory and practice of Chemistry, and of Physics.

The practice of Surgery, and of Midwifery may follow. Attendance at an Hospital, in which medical and surgical cases are to be seen, and practical observations collected; and at an house, where the practice of an Accoucheur may be in like manner illustrated, make up a list of the most essential studies. Lectures on Botany, and on Resuscitation, if time will permit, may deserve attention. An attendance on Medical Societies, the aid of a Tutor, Lectures on Experimental



Philosophy, and a knowledge of professional adjuncts may also merit the notice of a Student.

## CHAPTER THE FIFTH.

### *On Anatomy.*

#### Section the Thirty-Third.

**I**NCESSANT labour in the acquirement of an element, so interwoven with every part of practice, must be indispensable, hence whatever may conduce to its being diligently promoted, fundamentally grounded, and permanently retained must be of the utmost importance.

By a competent knowledge in Anatomy, a Practitioner is enabled to pry into the seat, and cause of many disorders; to form judicious, and satisfactory decisions; to prognosticate successfully, to argue with persuasion, and to obtain confidence. It is by this fountain the several streams of science are supplied; this is the superstructure, on which proficience must be grounded; it is this attainment, that directs the head, and guides the hand of a Practitioner; that manifests superlative talents, and ensures success.

A cool inquiry would demonstrate, that few

Practitioners have had merited fame, or have left behind them any traits of deep knowledge in the Science, but such as have evidently bestowed pains, and made some progress in this essential study. I have often heard my late Preceptor, Mr. Pott, observe, that the superior skill of modern Surgeons, depended chiefly on their being better Anatomists, and that, unless integrity was wanting, fallacious predictions might be imputed to ignorance in Anatomy.

This is the only real, and substantial basis for comprehending with perspicuity the structure of parts in health, and the changes produced by Disease; it is that matchless accomplishment, that conducts a Professor of the art to various remedies, and to a clear comprehension of the parts concerned in operations.

If the study of Anatomy be allowed to be an indispensable qualification for every province, the possibility of its neglect being undiscovered may prove the necessity of every Student being examined, as to the progress made, before he be licensed to practise. Those, who are not educated to the Profession, can be no Judges, whether the medical Gentleman, they employ, has any skill in this part of science; and it is to be feared, that



many are careless in studying it, if not others totally ignorant in this essential part of education. However such defects may be generally disguised, more sagacious rivals will find opportunities of exposing such ignorance. Young men, who look forwards to the impediments in practice, that must result from negligence, will consider the solid advantages of studious and unremitting application, and exert themselves in gaining proficiency in that acquirement, which must be esteemed the main-key to subsequent professional advancement.

### Section the Thirty-Fourth.

IN order that the constant application of anatomical students may be invited and uninterrupted, all prejudices, and obstacles should, as far as possible, be removed. It is the interest of every anatomical Teacher, to exceed others in the number of Pupils, hence their accommodation ought to be studied, and their disinclination to attendance, or mistaken apprehensions should be counteracted.

If the secrecy, with which such transactions are required to be conducted, in some measure obstructs ventilation, yet the cleanliness, and other conveniences of dissecting rooms might be better regulated. Daily visitors of such apartments may

be unconcerned at the view of such objects, or their disgusting smell ; but young Gentlemen just arrived from an airy situation in the country, are apt to dislike both the Theatre, and Study, and if indolently inclined, to seek excuses for withdrawing their attendance.

Some Anatomists may smile at the recommendation of all absconded parts being immediately removed, at parts under dissection being preserved in a cleanly state, at the floor, tables, and utensils being daily cleaned, at towels and water being provided, at established rules for preventing Pupils being uncleanly, at vinegar, or even some strong perfumes being used to overcome any disgusting smells, but if such easy methods of removing the complaints of Students would invite a more regular attendance they ought not to be disregarded. A Pupil may, it is true, furnish himself with aromatic vinegar, or some predominant scent, if he experience inconvenience. When assiduity can be prompted by such little attentions, they should not be deemed below notice. *Inest sua gratia parvis.* Such a correction of putrefaction may suggest to a studious Pupil a hint on the probable advantages of some such remedy in the living body.



I have experienced the benefit of scenting the medicines, consequently the breath, of persons in contagious fevers, with musk, of washing patients in putrid fevers with cold vinegar and water. On this subject there are many useful remarks in a late publication of Dr. Currie's.

In a study of such unlimited utility, every lecture should be punctually attended; and if emulation be ever amiable, and requisite, it must be called for on this occasion. Interrogatories, at the end of each lecture, are admirably calculated to improve Students; and at an anatomical lecture, I lately attended, I had the satisfaction of observing it practised. When, from the number of Pupils, a demonstration is of necessity repeated, such Students, as are unemployed in viewing, may seize the opportunity of writing notes.

As the lecture is often advancing, while preparations of parts already described are handing from one Student to another, great circumspection, in remembering their use, must be required. Dr. Monro told me, that his Preparations were taken immediately from the Theatre into an adjacent room, and commodiously ranged for the review of any inquisitive Pupil. The inspection of morbid parts may remind a Student of the necessity of anatomical studies, to enable a Practitioner to investigate the seats of internal maladies,

Explanations by drawings, or tables, as well as preparations, might be rendered permanently instructive to Pupils. The late Mr. Sue Chirurgien Major à l'hôpital de la Charité, an able Anatomist, Draughtsman, and Engraver, assured me, that his private Pupils exceeded in proficiency, by being additionally thus instructed. Dr. Hunter's objection to teaching Anatomy by Figures, was the customary incorrectness of such Tables; but the imperfections cannot be said to be numerous, and may be readily discriminated, or precluded by exacter representations. As the Dr. was at a great expence in procuring anatomical plates for Students, and Practitioners in Midwifery, there is every reason to believe, the use of perfect Engravings met with his approbation. A prize for the best drawing of any internal part of the System, hitherto imperfectly delineated, might be a mean of completing such beneficial guidances.

### Section the Thirty-Fifth.

BESIDES the lectures, a public demonstration is sometimes given, by way of rehearsal, in the dissecting-room; if the same decent, and respectful behaviour be on these occasions observed,



such lessons cannot fail to be highly serviceable ; but if private dissections be carried on, parts for dissection be left exposed, and the Students be disorderly placed, the benefits may be greatly diminished. The respect due to Professors should never be overlooked, but a sedate, and exemplary behaviour in Pupils be deemed indispensable.

When some knowledge has been gained by an attendance on lectures, and at demonstrations, a Student should himself become a practical Dissector. After tracing each peculiar part, before it be materially disturbed, it should undergo a review, and comment from some more experienced Anatomist. Interrogatories may be useful, to impress the retention of these important subjects. Since a proper manner of holding the Scalpel in all operations is essential, this is the time for acquiring it, and a principal thing to be observed, is that the knife should be always holden with firmness. The exact admeasurement, the comparative dimensions with adjacent parts, and the age of the subject may call attention.

The retaining of anatomical knowledge ought to be strenuously inculcated, and every method of imprinting it ought to be studied. If a student be able to take drawings of the parts he dissects they may be extremely useful to him, at a period,

when he might otherwise have forgotten such attainments. A retention of this study is not only necessary as a practitioner, but as an instructor of apprentices and pupils. It may also be remarked, that as professors of the Art become more aged, and experienced, they are commonly consulted in a greater number of rare, perplexing, and obscure cases, which usually require more than ordinary anatomical skill and discernment. In the more imperfect state of this science, Galen, though an Heathen, was led to such elevated reflections, as may be worthy the notice of an enlightened Christian, and tend to adorn his professional pursuits. Are there not more moral reflections, and virtuous principles, inculcated in the professional publications of our ancestors, than in the writings of a modern date?

## CHAPTER THE SIXTH.

### *On the Materia Medica.*

#### Section the Thirty-Sixth.

THE study of this part of Science may, without inconvenience, be prosecuted at the same



time with anatomy while a due attention to both may fully occupy the time of a student.

This attainment may be considered as introductory to Chemistry, and Medicine. It is necessary for every medical practitioner to have ascertained the names, and properties of simple drugs, as well as compound preparations. The skill in prescribing can avail little, unless the ingredients of a mixture be genuine, and in good preservation.

When examinations are made at Apothecary's-Hall, as a licence for practising in London, specimens of drugs are shewn by way of inquiring their names, but I am told these are so select, as to perplex most of the candidates, though they be no strangers to the articles in common use, under the same appellation.

Might it not be more useful to have also common specimens, by way of comparison, and removing useless difficulty?

If an Apothecary practising under the censorship of the Royal College be obliged to give proof of his knowledge of drugs, there can be no good reason for a country Practitioner being unexamined, or uncontrouled.

By a studious application to lectures on this subject, an acquaintance with Pharmacology is to

be derived. The officinals of our own country, with the places of growth, and seasons for their being collected ; the countries, from which exotics are imported, their genuineness, and the methods of detecting adulterations are here to be learned.

Much information on this topic may be selected from systematical writers, and also from valuable papers containing accounts of specific articles.

When unfortunately for a student a parent has neglected to look forward to the costs of subsequent studies, and some of them must from being unable to defray the expence, be omitted, a Pupil must content himself with gaining information from the best authors on the subject, and pay particular attention to all the instructions on this head communicated by a Professor in Chemistry. A Practitioner, who is defective in a knowledge of this subject, must be ill qualified to initiate his apprentices in the arrangement of the shop and more especially to satisfy the instructive questions of curious and ambitious Pupils. The qualifications of Students being disregarded in any part of the science is much to be regretted.



## CHAPTER THE SEVENTH.

### *On the Theory and Practice of Chemistry.*

#### Section the Thirty-Seventh.

A Practitioner cannot be an accurate, and neat compounder of medicines, without some knowledge in this practical branch of science; ignorance in chemistry may often prove the mean of precluding the benefit of a well-advised remedy. It is taken for granted, that every apothecary has learned to mix according to art, the several ingredients prescribed. A Pharmaceutist cannot be securely trusted, unless he have methodically learned the Art, and ascertained the elementary principles. A strict attention to this important part of science should be pressed on every medical student; that he may be able to distinguish between mechanical, and chemical mixtures, understand the simple substances contained in compounds, comprehend elective attractions, and the properties of factitious airs, with various information to

be reaped, from a diligent application to this study. By due pains, and a punctual attendance on lectures, not only much practical intelligence may be acquired, but also a permanent taste for prosecuting such experiments. A judicious Physician conversant with the art of chemistry deems it unnecessary to detail the manner of mixing the ingredients, of which his prescription is compounded, and expects an apothecary to be as skilful as himself in this art.

As a knowledge acquired in one preparation is frequently illustrative to a succeeding experiment, a regular attendance on each lecture must be of consequence. Very slight deviations in prosecuting any process may totally alter the effect, hence a scrupulous observance of every step is to be watched. In combining medicines, no less accuracy may be necessary, than in chemical experiments.

### Section the Thirty-Eighth.

A Lecturer may be induced to take extraordinary pains in forwarding the proficiency of a Pupil, whose taste for the science prompts him not only to curious inquiries, but to be ready to lend occasional assistance. Invalids may expect to reap greater benefit from medicines compounded by an



accurate Chemist, whose knowledge may also render him more skilful in the selection of remedies.

This study is intimately connected with the Theory and Practice of Medicine, and highly proper to be previously learned. A Practitioner, versed in Chemistry, may not only be better apprized of the noxious effects of some remedies, but be more quick-sighted in opportunely counteracting their pernicious effects. Calculous concretions are said to be soluble in diluted alkaline solutions, and in water impregnated with fixed air, or lithic acid, although such opposite modes of relief.

The former preparation a Chemist will be aware may prove a very hazardous remedy, and he will be no less apprized that its destructive effects may be counteracted by the latter.

When medicines composed of potent ingredients happen, by accident, or design, to operate in a violent manner, efficacious antidotes may be contrived by those, who have considerable chemical knowledge.

If nitric and muriatic vapours have been experienced to be useful, in correcting the infected air of apartments inhabited by febrile Patients; and substances containing Gas, as yeast, and alkaline and acid mixtures in a state of effervescence, have

been efficacious in checking the ravages of putrid fever ; may we not in time expect acute Chemists to find out some antidote, equally efficacious in restraining the deleterious qualities of venomous bites ; or the corrosive matter of cancer, and other intractable maladies ?

Since salutary remedies may be reasonably expected from advancements in this part of science ; and since a Practitioner well skilled in this branch may exceed others as an useful Preceptor, as well as Professor of the art, an inquiry, as to Students being learned in the science, seems to be both proper and necessary, that such as may be found deserving, may receive some mark of distinction.

Chemistry is not only fraught with permanent advantage to Practitioners in medicine, but affords both forensic amusement, and instruction. It enables a studious inquirer to search into the salubrity of a residence, the purity of the water, the properties of soils, and the choice of useful tillages. In commercial countries, improvements in the colours of each manufactory, by investigation of the nature of the water, and by contriving suitable ingredients may be much indebted to this art.



## CHAPTER THE EIGHTH.

### *On the Theory and Practice of Medicine.*

#### Section the Thirty-Ninth.

**E**XCEPT a Student make himself thoroughly acquainted with the history of maladies, he cannot expect to have proper discernment in distinguishing them, or success in their treatment. The study under deliberation comprises the preservation of health, the regulation of diet, the changes produced in the system by disease, the most probable causes, diagnostics, remedies, and expected effects. Since the art is yet imperfect, and infallibility has not been, by any practitioner reached; since novel remedies are frequently occurring, and no disease ought to be considered as incapable of relief, there will be sufficient scope for one, that is well versed in theory, and known rules in practice, to display his talents.

Although by the information gained at lectures, Practice may seem easy, yet pupils will find, when they come to act as practitioners, many un-

expected difficulties, both in the discrimination, and management of disorders; a strong reason, why no opportunity of studious application should be lost. A student may be sensible of the necessity of the preceding fundamental acquirements, as a prelude to the present lectures.

How can the history of maladies be understood without a previous acquaintance with the structure of the System, or how can the choice and application of suitable remedies be discovered, without a prior information as to the genuineness of drugs, and chemical combination of different mixtures?

This attainment is a kind of general luminary, which a practitioner in all the different departments must daily need. Since in Country practice, the province of Apothecary is often an introduction to the other branches of Surgeon and Accoucheur, and since setting out with *Eclat*, is of no small importance to subsequent emolument, abilities in this preliminary department becomes more indispensable. The failures of a beginner in practice will not be indulgently overlooked, nor the blunders of his pupils excused, and if an unfavourable opinion be once entertained, and promulgated, a good name will be with difficulty regained.



As prescriptions in the Pharmacopœia will be frequently advised in the treatment of diseases under discussion in these lectures, a dispensatory of a small size, such as Dr. Greaves's *Conspectus* may be a convenient pocket companion. Great attention should be paid by pupils to the superior efficacy of remedies applicable to the parts affected, to such as are adapted to particular occupations, or to peculiar habits. Unless a pupil endeavour to qualify himself in this branch, little hope can be had of his subsequent proficiency.

## CHAPTER THE NINTH.

### *On the Theory and Practice of Surgery.*

#### Section the Fortieth.

AS in Medicine, so in Surgery, a familiar acquaintance with the history of each disease must be requisite, a student must therefore vigilantly listen to the laborious investigations, and unerring descriptions detailed by experienced professors. It is not to be supposed, that professors have treasured up such a store of intelligence, as

is imparted, without uncommon application, or that professional fame can be obtained without more than ordinary exertion. Amidst the numerous and beneficial improvements in surgery, few of them will be found to have been accidental, or to have originated in a discovery by undisciplined practisers, but to be the result of sound learning, close application, and unremitting perseverance.

In these lectures the more simple parts of surgery will be discussed, and students should consider how necessary such knowledge must be towards comprehending more intricate disorders, or remedies. Every surgeon is expected to decide on the nature of a malady, and its treatment; on operations as to their propriety, their necessity, and the time; the preparatory means, the kind of performance, and the whole sequent management.

The word Surgeon, or Chirurgeon, in its primary acceptation, is but ill suited to the requisite qualifications, hence the term adopted by the late Dr. Kirkland, of Medical-surgery, or the title of Surgeon-apothecary would appear to coincide better with the character required. Nothing can prove more detrimental to a student, than diverting a principal share of his attention to capital



operations, or withdrawing his regard from other important studies of a more general nature.

Operations ought to be rather considered as information most likely to be seldom demanded, as the least creditable means of cure, and, with few exceptions, as last resources. Although such performances might extol the name of a surgeon, yet if he overlooked milder means of relief, or operated unnecessarily, and for his own interest, he would not be entitled either to credit or reward. If instead of limiting operations to capital performances, or cutting instruments, we include such manual aids, as the reduction of luxations, and fractures, which are more frequently, and more certainly necessary, then the caution may admit of an exception. When the accumulated attainments of an operator come to be enumerated it may be evident, that a knowledge of the more common parts of practice will be involved.

Although in these lectures the subjects discussed will be surgical, yet a pupil may observe how medical science is combined, and be sensible of the utility of both studies being pursued by a practitioner in either department. When these branches are practised, it may seem highly requisite to gain some proficiency in each as a student, lest

insufficient time should be hereafter allowed for adding much to the stock.

In all probability the instruments, and implements employed by modern surgeons, and the modes of operating now preferred will be described, and contrasted with those of older date. Some advantages may be reaped from the pains already bestowed in regulating, and arranging surgical implements during apprenticeship.

It may also be proper to call to mind the observations of the *Anatomical Professor*, on this part of the instructions. Perhaps some differences in opinion may suggest to an intelligent pupil, that practice is not altogether uniform, or settled, but an avenue left open for farther emendations.

### Section the Forty-First.

A student should not only pay strict attention to practical rules in the treatment of maladies, but should likewise notice comments on the proper conduct of surgeons, the persuasive arguments required to overcome the timid apprehensions of some, and the capricious perverseness of other Invalids.

The duties of a surgeon acting alone, or in consultation, and as a colleague at an hospital, may



be separately discussed, and may intimate an useful precaution to a surgeon, not to let slip opportunities of soliciting timely assistance, nor to be illiberal in professional associations.

It may on this occasion be subjoined as a rule of conduct, that a surgeon should not only possess professional qualifications, but these should be constantly adorned with virtuous principles, and engaging manners.

With such improved instructions duly impressed, a student may hope for success, profit, and promotion; he may become an exemplary tutor, and an ornament to his profession.

## CHAPTER THE TENTH.

### *On the Theory and Practice of Midwifery.*

#### Section the Forty-Second.

**I**F *Men* be preferred as practitioners in this art it must be on a presumption that, by having been regularly disciplined, they have greater skill, than *female* practisers. A legal inquiry into the

education, and qualifications of an Accoucheur should be an established regulation; nor should Professors in this department ever admit illiterate pupils; whose defective talents must preclude proficience, and render them insecure followers of the art. The misconduct of an individual may not only disgrace himself, but be justly blamed by innocent employers, and prove a reproach to the Profession. There are many essentials to be learned, and if levity be not precluded, knowledge requisite for practice will not be attained. It will be necessary for a Student to attend more than one course of lectures, as well as to be punctual in his attendance.

As in Surgery, so in Midwifery, it is not the first birth, or what is deemed the principal operation, to which the fame of a practitioner should be ascribed; but his being possessed of universal knowledge should alone give him a preference. In this part of science, there is a natural chain of connexion in the several stages, the comprehension, and uninterrupted preservation of which tend to qualify a practitioner.



### Section the Forty-Third.

BESIDES the instructions given by a principal Lecturer, additional remarks, or comments on practical writers have sometimes been subjoined by an assistant, an improvement that ought not to be rejected.

Much farther information may be gained by having occasional recourse to the late Dr. Wm. Hunter's excellent figures, and to the various modern authors on this important art.

The subject of Gestation, Parturition, Abortion and the management of children will require minute study; the anomalous cases and indirect intelligence, with which this part of science abounds, will also call for great attention. It will behove a pupil to class each topic, and to combine all the knowledge he can collect; to separate every distinct part, and particularly the after-treatment in the course of his studies.

The advantage of having already imbibed pharmaceutical and surgical knowledge will be too obvious to need explanation.

When a student has exerted himself in each of these provinces he may find the practice of a

skilful Accoucheur the best introduction to the whole employment of a Surgeon-Apothecary.

## CHAPTER THE ELEVENTH.

### *On attendance at an Hospital.*

#### Section the Forty-Fourth.

IT is at this practical seminary that an intelligent student may bring his theoretical attainments to the test by his own careful observations; the benefits of such an improving school are therefore not to be lightly esteemed. Since this may be supposed to be a conclusive study, it is of the utmost consequence, that the practical rules recommended should be an unexceptionable guidance for young practitioners. There are no doubt many additional benefits to be derived by having the privilege of dressing patients, taking the first management of casualties, and of acting under the direction of a principal Surgeon; but in such capacity the difference between public, and private practice should be cautiously consider-



ed. The sudden calls both to the lying-in, and other Hospital, may render the choice of a commodious habitation necessary. A reflection on the great expences to which regular students are subjected, and the humiliation they must feel of being necessitated to intermix, with intrusive and illiterate pupils should induce Hospital Surgeons to refuse the admittance of such young men, as can never redound to the dignity of professors, but must frequently detract from the credit of the profession.

The advantages of such attendance depends much on a pupil's becoming thoroughly acquainted with the most common parts of practice, which are most likely to be wanted by a Surgeon-Apothecary, and are no less necessary to qualify an Operator. Young men are apt to neglect the previous qualifications, and almost to disregard any thing but the operative part of Surgery, which is the least requisite for a general Country-practitioner. Although a diamond may be ornamental, yet it is unfit for common use; besides it must be skilfully polished, and the last lustre be imparted to it by a skilful artist, before its intrinsic value can be clearly ascertained; thus the completion and success of operations depend on numerous preparatory acquirements little noticed

by a superficial beholder. Besides the general advantageous treatment of common cases, rare, anomalous, and intractable diseases may intimate the great utility of a student's writing down such observations, as the practice may suggest.

The necessary and established rules for consultation may afford many instructive hints to pupils, not only by shewing the undoubted advantage of united sentiments, but also remind them of the propriety of calling in timely assistance in their own practice. It is only by strict vigilance, that the unexpected changes met with, and the quick discernment requisite for restoring success can be seen to advantage.

Not only professional information is to be regarded, but the proper behaviour of a practitioner is at this Asylum to be studied.



## CHAPTER THE TWELFTH.

### *On Botany.*

#### Section the Forty-Fifth.

**A** Student becoming conversant with the names of officinals, their place of growth, several distinctions, and uses, together with the particular seasons at which the collection of them is most proper, must be better qualified to practise as a Surgeon-apothecary. A country-practitioner may not only have frequent opportunities of gaining proficiency by his theoretical attainments, but be more competent to afford useful instruction to his pupils, and to his neighbours, as to the utility or deleterious effects of common herbs. If medical practitioners would in a greater degree limit their inquiries to officinals, their application might be more useful. An intelligent botanist may have frequent opportunities of gaining the good opinion of such as may be qualified to judge of his acquirements. When a student has previously learned the art of drawing his attainments may be

expedited, or he may derive advantage from making a Hortus ficcus. If in green or hot houses the choice of such exotics as promised, or had in a dried state been imported from warmer climates, and observed to be efficacious officinals, were preferred, greater advantages from their use, in a recent state might in many instances be expected; and we might, by experiments, find that many such plants would grow in our own island.

### Section the Forty-Sixth.

THE various means of procuring, at a less expence, sufficient heat for forcing exotics may encourage their cultivation, and point out additional benefits. By the exertions of Count Rumford to prevent the waste of Fuel, Mr. Wakefield and others to produce heat by steam, or a lime-kiln, many unexplored uses may result.

Next to officinals, the art of dying for the use of our manufactures; the propagation of the most profitable Forest trees, and the readiest, as well as cheapest mode, of forming tillage, may deserve the inquiry of an intelligent botanist.

Since practitioners in medicine are often solicited to visit distant climes, national advantages may be gained by their ability, and taste for the



investigation of native plants with the soils in which they seem to be vigorous, a conjecture respecting necessary heat, and the uses for which they may be famed.

The study of botany like that of chemistry may prove a source of amusement should a practitioner be induced to change an active life for retirement.

## CHAPTER THE THIRTEENTH.

### *On Resuscitation.*

#### Section the Forty-Seventh.

THE success, that has been published of the restoration of persons, apparently deprived of life, render the study of this subject a necessary part of erudition. Not only the directions how to act in promoting reviviscence; but the care, and caution in not overacting, or suppressing returning animation may equally deserve regard.

The prizes, that have been given by the Medical Society, have contributed much to bring forward a fund of useful intelligence, nor is the sub-

ject nearly exhausted; future improvements are more likely to be offered by those who regularly study under well informed lecturers. The Humane Society have not only announced the best manner of recalling life, but have lodged in suitable places a set of the requisite implements to be employed. When practitioners are too distant to profit by their use, they ought to be provided with Mr. Kite's, or some other ready apparatus, since the calls for assistance are exigent, the opportunity of recalling life is short, and delay dangerous. Besides treatises on this topic, there are many useful periodical papers, or distinct chapters.

## CHAPTER THE FOURTEENTH.

### *On Professional Adjuncts.*

#### Section the Forty-Eighth.

THE preceding Inquiries may be deemed strictly professional, and may sometimes fully occupy the whole time, that a pupil may be allowed, for subsequent studies; it is however expected that practitioners should have gained general knowledge, and be able to argue on every



subject connected with Medical Science. A year and a half, or two years ought to be granted to every student, that is qualifying himself for the practice of a Surgeon-Apothecary, and with this indulgence there will be little time for pursuing any amusements, or topics unconnected with his profession. To render necessary investigations less tiresome, lectures on experimental philosophy, and on natural history may prove not only entertaining, but highly ornamental, and essentially beneficial. It is certainly much more creditable for pupils to spend money in obtaining knowledge that cannot fail to redound to their future interest, than in fleeting, and unprofitable diversions. An acquaintance with Mechanics, Optics, and Electricity; with the various productions naturally existing in this Country, may materially aid a medical practitioner.

### Section the Forty-Ninth.

MEDICAL societies have not only been established for the advantage of practitioners, but also for the communication of one student with another. The subject for discussion is usually prefixed, with a view that each member may collate all the information in his power, and by re-

flection enable himself to improve the more from what may occur at the meeting. Such studious researches may tend to give a taste for similar inquiries as a practitioner.

Intimacy between neighbouring professors of the art is difficult to cherish, and apt to be interrupted by jealousy, or interested rivalry; but this emulous intercourse of students may not only promote knowledge, but form permanent connexions, and friendship built on the ingenuous sensibility of adolescence is often more deeply ingrafted, than at an advanced period of life. However easy, and flattering practice may appear from the instruction imbibed at lectures, the dissention, and opposite sentiments of studious observers, and experienced practitioners at their meetings may clearly demonstrate the necessity of subsequent proficiency. Should a diligent and animated student be permitted to offer his opinion, such a declamation and the comments on it may enable a pupil to pass a more honourable examination.

### Section the Fiftieth.

ALTHOUGH considerable benefit may in future result from the unwearied attendances recommended, yet intense application without relaxation may be prejudicial to health; hence exercise



becomes absolutely necessary, but these requisite perambulations may be rendered useful, if a student have already acquired a taste for such pursuits as may prove beneficial in practice. A perfect acquaintance with mechanics, and their useful contrivances, may not only imperceptibly qualify a Surgeon-Apothecary to improve, and construct useful mechanism, but may recommend him to persons, who would otherwise have remained strangers to their professional abilities. While a pupil is on the spot, where the most eminent projectors reside, and the greatest variety of inventions may be examined, he should not neglect inquiry or view. At the shops of Instrument-Makers, and Opticians many pieces of mechanism may be seen, that would be useful in the course of Country practice. In order to bear in mind the most approved forms, the address of the Artist should be carefully preserved, and a sketch of an excellent contrivance, or one apparently capable of improvement might be particularly useful.

Sanguine inventors may be desirous of extolling their schemes beyond due bounds, of which an examiner, better acquainted with anatomy, and the proper intentions should be apprized.

A survey of the instruments recommended by

practical Surgeons, and a careful review of the apparatus required, may shew the utility of a student procuring general information on such topics. As a minute regard to theoretical attainments inspires future inquiry into practical improvements, so a general knowledge of the latter may prompt Students to an investigation of more particular intelligence. It would be of little use for a practitioner to receive a piece of mechanism the application of which was out of his, and his patient's power. A knowledge of metals, the mode of tempering, repairing, and cleaning them; of the construction, design, and adjustment of different contrivances may prove a material aid to employers. The daily improvements in instruments may intimate the judgment of a Surgeon being more immediately requisite, while his acquaintance with their superior advantages may prevent any unnecessary increase of his stock, except of such kinds as may be demanded in exigent cases. At present we are more indebted to Artists, than to professional men, for implements necessary for Surgeons, or inventions for invalids.

When we consider the superior advantages capable of being derived from the application of Students in Anatomy, Medicine, Surgery, and



Experimental-Philosophy, with the addition of a minute investigation of such pieces of mechanism as are already invented, we may reasonably expect greater perfection in this important, adscititious, but necessary part of practice.

Mechanics have seldom acquired a clear comprehension of the structure of the parts, or the full intentions required of their implement, hence they are often misled by a wish for neatness more than necessary exactness, and are difficult to be convinced of any imperfection discovered in their mechanism. A mechanical Surgeon, who uses, or adapts, and occasionally examines the fitting of any machine, which he has invented, will not only be a more accurate judge of its perfect simplicity, suitable levity, or stability, its facility of application, ease, and utility, but will patiently hear the complaints of his patients, and studiously endeavour to improve its construction, and permanent efficacy. Dentists' instruments, Electrical machines, artificial Arms, Legs, Eyes and Teeth, the Amputation-Saw, the Trephine, the Trocar, the Fracture-Box, Trusses, and numerous Implements have been contrived, or improved by ingenious Mechanics.

We are however materially indebted to many surgeons for improvements, in the instruments for

the Abscess in Ano, for Amputation, Harelip, and Lithotomy; in bandages, needles, splints, cutting gorgeot, forceps, lever, and other mechanism for Fractures, distorted spine, pelvis, or other bones. When practitioners regularly trained have contrived such mechanism they have seldom failed to accompany it with a disinterested and clear explanation of the views, application, and expected advantages capable of being derived, without expressing a desire to conceal the mode of constructing it, or depriving persons in general of its use. The accuracy, and suitableness of form have generally contributed to the facility of application, and future ease, as well as double effects; whereas mechanics have either gained Patents, or limited the manufactory to themselves, in order to make exorbitant charges. When credit and a display of skill are greater objects than extravagant profits; the price of workmanship, the length of time requisite for obtaining nice distinctions, or proportions, the thorough completion, and the fair charge of such inventions may be more securely relied on. I may be unable to instance a more striking proof of the advantages to be expected from regular surgeons turning their mind to this treatment of maladies than to the pains taken by Mr. Chesbire, of Hinkley in



Leicestershire, who gives up a principal part of his time to improve mechanism calculated to cure distorted spines, pelvis, or limbs; and from his long experience, and unremitting application, together with a laudable ambition to excel, it is hoped the practice will be materially improved. His instrument seems to support the head, and by a proper Fulcrum on the pelvis to give the crooked spine, previously straitened, a fair opportunity of being retained in a favourable position. The attention that is paid to gradual distention in a state of rest, and to every mean for promoting the health of his patients merit the encouragement that is given him. Since many useful hints may be derived from an inquisitive examination of the materials, measurement, mode of action, levity, stability, or other perfections great attention will be required.

A mechanical surgeon may sometimes take a hint from other machinery as well as professional implements, hence he may profitably visit the ingenious contrivances of Messrs. Bolton and Watts, Mr. Cartwright, Merlin, and others.

Not only the movements may throw light on the contrivances wished for by a surgeon, but their levity may be acquired, by observing, that iron, or steel, made elastic by rolling, instead of being

beaten, is not only lighter, but less liable to be broken, while muscular motion may be imitated by elastic wires.

## CHAPTER THE FIFTEENTH.

*On the Characteristics requisite for a  
Surgeon-Apothecary.*

### Section the Fifty-First.

SINCE the scope of science like the trust is unlimited; and a breach of duty highly culpable; since the employment of a practitioner abounds with variety, and patients are generally incompetent judges of their security; since the instruction of pupils, and the dignity of the profession are materially concerned, many essentials must be required to complete the character. Literature is the Polar Star, that should guide a professor of the art, and warn him of what is noxious; it is the main stimulus to proficiencie, and candidly exhibits defects, hence a neglect of learning seldom fails to carry with it a load of censure, and a disposition to illiberality. The late Dean



Swift from a neglect of academic learning was refused the degree of Batchelor of Arts, by the University of Dublin, and when some time after he was admitted to that honour, it was speciali gratia, which is there considered as a mark of shame; severely mortified with the disgrace, he studied eight hours a day for the following seven years; his future celebrity requires no encomium. The advantages and necessity of a proper education, and the contrast of an indocile pretender have been already set forth. The remaining qualifications seem to be; method, affability, sobriety, humanity, resolution, integrity and zeal in professional concerns.

### Section the Fifty-Second.

METHODICAL rules are too important to be disregarded, and too generally instructive, and beneficial to be lightly esteemed. By tracing each part of erudition distinctly, greater attention it is hoped will be paid to the regulations proposed. There is in method a simplicity, that adapts it to the most experienced, as well as those of the weakest capacity. Since methodical forms are but slowly completed, received, or rendered habitual, they should be early commenced, lest increasing business should check progression, though it would

otherwise add to the necessity. By custom method becomes easy, instructive, pleasant, and profitable; without it useful regulations are arduous, and difficult to be accomplished, yet a neglect of them is often disadvantageous, and detrimental. I have seen a printed paper, said to be a calculation, of a Mr. Parker, an Attorney at Hallifax, for the use of his clerks, as to the saving of time in a year, by rising an hour sooner than usual: and the leisure resulting from method would be equal. The initiation of young men, so as to make them safe to be relied on, and the responsibility of a master easy, and satisfactory, is essentially expedited by a preceptor being constantly methodical, and requiring his pupils to follow his example. Regularity in one concern seldom fails to invite it generally, and its good effects are so self-evident as to render it permanent.

### Section the Fifty-Third.

AFFABILITY, and polite manners form a professional man for an easy admittance into the company of his superiors, and afford him frequent opportunities of gaining their esteem. It is to these accomplishments that many practitioners owe acquired fame, as well as to professional abilities. If in any province affability is required,



it must be no less so in the character of a Surgeon-Apothecary. In order that this incumbent qualification may be attained, some inquiry into the scholarship and regular discipline of youth should not be neglected; for ignorant intruders are usually arrogant, and uncouth in their manners, are ill calculated to appease the sufferings of their credulous employers, but rather trust to an artful deception of their imagination. Men of letters are better qualified to instil joyful hope by a diffident, yet engaging persuasion, and are ashamed to gain emolument by illiberal behaviour. Refined talents, and courteous expressions are not only engaging, but invite useful communication from literary acquaintances. Many misfortunes are as terrific in apprehension as in reality, hence it may be in the power of a confidential, and polite medical attendant, by persuasive argument to alleviate mental distress. Arbitrary and assuming demeanour is the customary veil for ignorance, and disqualifies a practitioner as a teacher, or example for pupils.

### Section the Fifty-Fourth.

UNLESS sobriety be included in the list of characteristics it would be extremely defective;

whether the etymology of the word be limited to the avoidance of drinking to excess, or also to serenity of disposition.

It has been absurdly argued that exhilarating liquors have proved useful in furnishing professors of the art with necessary firmness of mind for executing requisite business. When we consider that intoxication obtunds the faculties, disarms a man of his reason, and by giving vent to passion disables him from resisting vicious habits; precludes proficiency, or incumbent reflexion on the nice, intricate, and important distinctions demanded for judicious, and safe decisions, we cannot but be sensible of the critical situations, to which invalids trusting in an inebriated practitioner must be exposed. The loss of valuable time, and of emolument, the impairing, or destruction of health, the difficulty of animadverting on the like baneful habit in patients, and the consequent inconvenience to a practitioner's family should deter him from this pernicious and dangerous habit. It is a great folly to deviate in hope of being able to withdraw a bad custom. The reproach that must fall on the profession should be duly considered, if other warnings against this painful suicide should fail.



Without a Surgeon-Apothecary possess a serene and tranquil disposition he must be ill fitted for the sudden, and alarming cases that fall under his care, and demand presence of mind.

### Section the Fifty-Fifth.

HUMANITY is a fountain, from which so many good qualities spring, that it is generally mentioned, as the most acceptable, and approved part of character. Sometime ago it was so unfashionable, that however sympathising the natural disposition of a Surgeon might be his language must not coincide, but appear terrific; fortunately such a fashion is now out of date, and the reformed, and refined manners of a modern Surgeon are not deemed inconsistent, but laudable. An humane Surgeon will not suffer specious fame, pecuniary advantage or self opinion, to warp his judgment, move his integrity, or pervert his decisions. A feeling for distress may animate a skilful Surgeon's prudent expedition, while an unskilful Operator may be justly censured for hesitation, and want of sympathy. Advice contrary to judgment, or the general opinion of the best qualified practitioners will seldom be found ultimately commendable, but usually indefensible. Want of humanity may be suspected, when prac-

tioners manifest an unwillingness to have others consulted, lest their own infallibility should be doubted, or their procedure closely investigated by an intelligent colleague. Humanity teaches us to consider every distressed object, as a relative, and to shew him equal compassion, nor is it at all incompatible with that fortitude recommended in the next section. When practice is unmingled with sympathy, ignorance and mercenary views are generally the true cause.

### Section the Fifty-Sixth.

RESOLUTION originating in profound skill, ready execution, modest worth, and unimpeachable morals will direct a practitioner to fulfil his duty, and do justice to every employer. When painful remedies are unavoidable, timidity would exclude necessary reflection, and requisite dexterity. A want of fortitude in the beginning of an operation would often involve the rest of the procedure in great difficulty ; yet at the commencement of a performance boldness is least exceptionable, nay in most capital operations of use throughout the procedure. By an anticipation of the whole transaction true firmness of mind may be best attained, and rashness avoided. Enterprise



without skill, or a desire of gain may actuate a worthless practiser to advise, or proceed diametrically opposite to the rules of art, without dismay, or due feeling for his patient. An invalid may assent to an unadvisable measure with as much composure, and satisfaction, as if it were the most approved, from a full reliance on the person consulted. Some care, and caution may be necessary to chuse not only a skilful, but an honest practitioner, who will be likely to be both humane, and resolute, to act as if he were conscious, that some eminent, and ingenuous professional judge was constantly watching his steps. Were practitioners timely apprized that defective education, or application, were likely to make them irresolute, and procrastinating at a time, when courage, and dispatch were expedient, such intimation might produce successful exertions.

### Section the Fifty-Seventh.

INTEGRITY points out to a practitioner the securest road to do as he would be acted to by others ; to speak as he thinks, to perform his engagements, to prove himself in reality what he would wish to be esteemed ; while insincerity unfits a man for any trust, prompts him to make a bad use of his knowledge, and to consult his

own interest more than the good of his patient ; leads him into unforeseen embarrassments, and eventually creates contempt. Virtuous principles ought to be early inculcated, and invariably applauded that they may be firmly rivetted, and incapable of being controverted or shaken. An upright man has no need of ambiguous circumlocution, or subtle schemes ; plain dealing, naked truth, and undeniable facts are sufficient for his appeal. Sincerity teaches us to consult justice and act with liberality. When a medical student has had a regular education, he may be fairly expected to preserve an irreproachable character, and maintain the dignity of his profession, that he may be distinguished from that class of practisers, notorious for professing more than is in their power to perform. A greater regard should be paid to this invaluable, and indispensable obligation, since a want of it may prove a source of continued suffering, and irreparable mischief, without the real cause being discovered, or even suspected. May those, who fill such important offices, never fail to possess this inestimable characteristic, and urge the practice of it to their pupils.



### Section the Fifty-Eighth.

ZEAL in professional concerns can scarcely be looked for without suitable elementary qualifications ; hence it may be observed, that one characteristic may be requisite to promote, and become a help-mate to the attainment of another. Without learning and assiduous application a man may follow the profession many years, and yet be little wiser than when he set out ! An ardour for watching the progress of diseases, and the success of remedies, for profiting by practice, and improving experience by proficiency can alone entitle a professor of the art to be thus qualified. Unless a taste for the profession be acquired many valuable hints will be lost, and the attention will be diverted from study to other pursuits. Aikin's and Hutchinson's Biography afford us examples of zealous practitioners, worthy of imitation ; and there are many professors, whose zeal, and taste for the science render them well qualified for imparting instruction. This qualification may be said to be out of the reach of illiterate pretenders, which may be urged as a reason, why every regular practitioner should be thus distinguished. Hospitals have tended to promote

this valuable characteristic, and it is hoped that those, who possess it, will at such Establishments be always preferred. To this attainment we are indebted for the superior skill displayed, and the practical observations communicated.

Many practitioners have fallen into errors from too exalted notions of infallibility, while men of more obscure note have excelled from being steady observers, and more cautious in deciding. Every one has something in his composition capable of being improved by an unwearied zeal for proficiencie. The more universally this characteristic is possessed, and the greater extent of inquiry, and into more various subjects may be expected. By one cause or other practitioners frequently prefer a single topic for their studious regard, and so zealously prosecute it, as to add valuable remarks, or comments, to what has been already published, hence improvements on almost every subject are gradually increasing. Intuitive knowledge is sometimes imbibed by an attentive, and studious observer; while one is becoming quick-sighted, another gains a superior knowledge by what is called the *Tactus eruditus*; while one excels in determining by the countenance



or in physiognomy, another acquires ambidexterity. By a strict vigilance, and more experience in one disorder, greater intuition is reached, and consequently greater success obtained. By unre-mitted application, and perseverance, added to an acquaintance with fundamental rules, some practitioners possess more than ordinary skill in the treatment of disorders in general, and when edited information has not served their purpose have been able to invent other means, by judging from analogy. To this characteristic practitioners commonly owe that distinguishing superiority of prognosticating by present appearances future events.

By the faculty of quicksightedness is meant that keen penetration, by which one complaint is readily known, and discriminated from every other malady ; yet it must be acknowledged, that any defect in vision may become highly objectionable in an Operator, and to his assistants.

A decision on the pulse, or on a tumour, by a *Tactus eruditus*, may reflect great credit, a practitioner is not to depend solely on this single guidance but to call in other aids, as may be exemplified in the Hydrocele, the transparency of the tumour may be also known by an examination with a candle in a dark room. Assistance may

likewise be gained by animadverting on the primary causes of diseases, or inquiring into peculiar habits. Ambidexterity may also increase the power of distinguishing by the touch, and the earlier these accomplishments are aimed at, the more complete may we expect them to be.

A right hand of a practitioner may be maimed or incapacitated from performing a necessary operation, the situation of a patient, or an affected part may render an indiscriminate use of either hand not only commodious to an Operator, but more convenient to an invalid. In bleeding, and couching the utility of ambidexterity may be fully evinced. The advantages of it are chiefly confined to light instruments.

If every single characteristic be essential, of how much more importance must be their co-operation ?



## CHAPTER THE SIXTEENTH.

### *On Medical Libraries.*

#### Section the Fifty-Ninth.

**C**IRCULATING libraries are now established in most towns, and few are without professional separate collections, with excellent regulations for their management. At Edinburgh there is a copious medical library for the use of students, and practitioners, with an arrangement, deserving imitation. In several infirmaries, or dispensaries, throughout England, may be met with valuable public medical libraries, which seem to be much wanted in London, either in one general collection, or at each principal Hospital. The price of books is now much increased, and few individuals choose to purchase a large quantity, whereas a general subscription may give contributors an opportunity of seeing most novel, and valuable works. The college of Physicians, and of Surgeons, the company of Apothecaries, the medical Officers at Seminaries, the Students, and Authors might be expected to contribute to such

a library. The success of such institutions must depend much on the strictest order being preserved in the arrangement, and letting out of the books. The disposal of the contents of the Apothecary's shop and its division may sufficiently furnish hints for the library.

An alphabetical catalogue of every author is common, but I should also recommend as an invaluable addition, a reference, or list of every main topic, with the alphabetical name of every author that has written a book on each subject. When such a ready method of recurring to all the authors in a library was procured, a little reflection would point out the utility of conjoining the supplementary parts of several libraries, and then annexing a more minute account of the titles, editions, price, size of each book referred to, as a common Index from general subjects to numerous Authors.

Such a catalogue would be found inviting to students, a ready help to practitioners, and an assistance to writers. The composing of such an appendix reminded me of a reference from principal subjects to authors, who had written thereon, being defective, and capable of being amended, or made more beneficial, by a farther guidance to



papers, chapters, articles, or sections of books, the form of which will be next treated on, and described. It is not difficult to remember the name of an author, who publishes a whole treatise on the same malady, though it be so, to recollect a more concise, or indirect account, in a separate part of a volume; and this difficulty is increased when many distinct publications are reprinted in one work, as is the case in Mr. Earle's three volumes of the late Mr. Pott's publications, and others.

*An alphabetical Catalogue of Authors.*

Abbernethy's surgical essays, 2 parts

Aikin's biographical memoirs of medicine

———remarks on hospitals

———translation of Beaumès chemistry, 12mo.

———materia medica

Albinus's anatomical tables and explanations, Fol.

Allanston on amputation, 2d edition

Arbuthnot on aliments

Armstrong's medical essays

———on the diseases of children

Beddoes on air

———on pulmonary consumptions

Bell on cancer of the breast

Bell on the venereal disorder, 2 vols.

———ulcers

——'s (John) anatomy with plates

———system of surgery, 6 vols.

Bergman's chemistry

———mineralogy

Berkenhout on the bite of a mad dog

———symptomatology |||

———synopsis of natural history

Birch on electricity

Brandon on retention of urine

Bree on difficult respiration or asthma

Cheston's pathological and surgical observations,

Quarto

Crawford on animal heat

Cruikshanks on absorbing vessels

Cullen's first lines on the practice of medicine

———institutes

———letter on recovery of drowned persons

———materia medica

———nosologia



*An alphabetical catalogue of Subjects  
with reference to Authors.*

- Absorbent system, Cruikshanks  
 —————Hewson, Sheldon  
 Acid nitric, Beddoes, Smith  
 Acids, Farr, on  
 Air, Huxham, on  
 —————fixable, Falconer, on  
 —————fixed, Dobson, Harrison, on  
 Amputation, Allanson, Kirkland, Minors,  
                   O'Halloran  
 Anatomical lectures, Hunter's, Jenty's  
 —————instructor, Pole's  
 —————tables, Albinus's, Bell's, Cheselden's,  
                   Monro's, Sué's  
 Anatomy, Bell's, Cheselden's, Douglas's, Innes',  
                   Monro's, Simmon's, Winslow's  
 —————morbid, Baillie, on  
 Angina malignant, Johnson, on  
 —————pectoris, (vel syncope angens) Butter,  
                   Parry, (Dr.) on  
 Animal respiration, Goodwyn, on  
 —————difficulty of, Bree, on  
 Annals of medicine, Duncan's  
 Arsenic, Fowler, on  
 Asthma, Bree, Floyer, Millar, Withers

*An alphabetical catalogue of Subjects  
with reference to Papers, Chapters, or  
Sections, under the title of Concor-  
dance.*

Ablution, Pringle on Camp diseases, page 296.

London medical journal, index vol. 11.

————inefficacy of, Lind on fever and infec-  
tion

Abortion, Edinburgh medical essays, and Com-  
mentaries, both vol. 2. Denman,  
Johnson, Leak, London medical  
memoirs, Manning, Mauriceau,  
Moss

Abscess in Ano, Earle's edition of Pott's works,  
Edinburgh medical essays, Le  
Dran, see Fistula; London me-  
dical facts, Observations and  
inquiries, Mudge

————the breast, prevention of, Clubbe,  
Crutwell

————Cerebello, Edinburgh med. essays vol. 6

————Pleura, Bromfield's chirurgical obser-  
vations, vol. 2. page 92.

Gooch's surgery

————Psoas, London medical journal, vol. 7.

Tomlinson's miscellany, page 165.



## CHAPTER THE SEVENTEENTH.

*On a medical Concordance or Directory.*

## Section the Sixtieth.

WHEN we look over Cruden's concordance, and many other references from subjects in divinity to the Scriptures, or other valuable publications, we need not despair of seeing as voluminous a medical concordance, which would prove of much more universal benefit, than the double catalogue already described. Haller's *Bibliotheca chirurgica et medica*, Lauth's *nosologia chirurgica*, various periodical publications, copious indexes of systems, or miscellaneous works, and the private registers of practitioners, might furnish the editors of such a directory with endless matter worthy of being noted.

If such a work were published by Societies, who meet for the improvement of each province, by subscription, and its profits were appropriated to the benefit of the charitable fund, recommended in the last chapter of this miscellany, the assis-

tance of many benevolent practitioners, and diligent students might accelerate its publication, and promote its sale. One assistant might present references to ancient, another to modern books, and different persons might engage to collate in some fixed parts of science or languages, according to their several abilities, or inclinations.

## CHAPTER THE EIGHTEENTH.

*On a Medical Journal, Case-Book,  
and Synopsis.*

### Section the Sixty-First.

A Surgeon-Apothecary in the beginning has usually much leisure which cannot be better employed than in preserving satisfactory references to the books he reads, and entering such observations as may assist his subsequent practice. Practitioners are usually preferred for their experience, but unless practice be aided by observation, and endeavours to improve, such a mode of determining would be of little use. In a multitude of



counsellors there is said to be safety; when a professor of the art has impressed his memory, and can speedily recur to all the information he has studiously searched out, he need not practise on his own opinion only, but on that of various authors. Bell's improvement on Locke's Common Place Book may serve as an example, or an intelligent practitioner may invent a journal of his own. There are so many cases, that turn out eventually curious, and deserving remembrance, that a young Surgeon-Apothecary may derive great advantage, from keeping a detail of the daily progress of diseases in a separate book.

As business multiplies a few hints on the leading signs of diseases, or the treatment recommended by the most approved writers may be collated, and so shortly noted, as that a small book may be sufficient to contain brief remarks on every disorder.

When a habit of minuting the practice of others, and the observations resulting from experience is once acquired, it becomes easy, and the use of it seldom fails to render it a copious, and instructive work, encouraging its possessor to valuable communications.

## CHAPTER THE NINETEENTH.

*On Pretenders to the Science.*

## Section the Sixty-Second.

A N entire prohibition of imposters in medicine may be impracticable, but since regular practitioners are best judges of their errors, and mischievous practices, an inquiry respecting them may be proper, and beneficial. A contrasted view of the pernicious effects of want of learning and skill, of application, or integrity, may farther demonstrate the necessity of possessing the preceding qualifications. It signifies little whether a practiser avows his being undisciplined, pretends to knowledge from having been a little while employed in some subordinate capacity, or be merely from his own neglect incompetent, provided his practice be illiberal, mercenary, and injurious. Many think medical men partial, and the greatest enemies to *Quackery*, but it is to be lamented, that some who have had a liberal education have been justly blamed for deserting the



honour of their profession, and like empirics concealing the remedies they recommend in consultation, or advertising specifics at an exorbitant price. Whatever restraints, regular practitioners are subjected to, could not be a hardship to be required of Quacks. Government have endeavoured to draw the line between regulars, and irregulars, by obliging Navy, and Army Surgeons to be previously approved; the Legislature has shewn a similar disposition in directing every dispenser of medicines, who has not served a regular apprenticeship, to be on the same footing as an empiric, and to be equally taxed; and has also obliged every Slave-ship to have on board an examined, and approved medical practitioner. In the metropolis every Professor of Medicine, or Surgery, is obligated to take out a licence to practice. Is it not extraordinary, that Accoucheurs are not subject to the same useful obligation, and that a Surgeon-Apothecary, and Accoucheur may practice in the country without any examination or control, though more remote from the Seat of Legislation? Greater protection is legally granted to Negroes, than to British Subjects. Is it that professional qualifications are useless, that the want of them is not prejudicial, and that Quacks have a just claim to preference?

The bold promises, made by empirics, engage the belief of their admirers, whose imaginations are willingly deceived, apparent success is, beyond credit, extolled, and failures are carefully concealed. Were the naked truth brought forward, irreparable injuries, or fatal consequences would frequently be detailed.

These dismal incidents come to the knowledge of experienced practitioners, who are often discouraged from exposing them, because of the little credit given to their relation of the most glaring facts. Whether we examine the professional attainments, or the principles of such intruders, we shall rarely find any thing worthy of imitation, or praise; we cannot however deny that regular practice is less profitable.

Advertising Quacks are in general safer to be trusted, than itinerant pretenders, who have not only received extravagant prices for baneful drugs, but have administered deleterious remedies; yet the former largely and doubly contribute to the Revenue, while few if any of the latter pay at all, though no less subject to be taxed. A strict inquiry into the causes of Coroners inquests might be extremely useful in precluding detected offences, or remedial accidents. The greatest advocates for empirics pretend not that they are ac-



quainted with the history of maladies, or competent to instruct pupils, but frequently suppose them to have some miraculous-innate knowledge, unwilling to own, that their cures are often owing to an imposition on imagination, or from a credulity which the more diffident promises of regular practitioners do not invite. The Public is much indebted to Dr. Haygarth for his treatise on ligneous Tractors.

In order that a discrimination of unqualified pretenders to Science may be attained, every regular practitioner should be examined, and approved, in whatever part of the Country he may reside, and a list not only of regulars, but of irregulars should be duly registered; nor should Quacks be suffered to have in their custody poisonous, or potent and dangerous drugs, but be liable to the visitation of medical Censors, as much as the Apothecaries in London now are, and be obliged to give notice, when they change their name, or habitation, that they may not evade any taxes.

It would be painful to enumerate the injuries sustained by Society, for want of some restrictions as to impostors in medicine. It is wonderful what an infatuation, and credulity are given to the most barefaced impositions. Although health be

the most valuable blessing in life, yet it is without concern, or caution often trusted to the most illiterate. Let not fashion, observes an able writer, prevail in setting aside the votary of science to prefer the needy and ignorant Quack. It may be added let those who fill professional trusts never fail to urge the necessity of a methodical education ; let those who are indulged with it profit by it, and by their indefatigable assiduity become proficient in the art, support an unblemished character, secure honour, and merit esteem.

When we compare the want of application with the requisite assiduity to obtain sufficient proficiency, the want of integrity in Quacks with that indispensably required of regulars, we shall find no good grounds for envying the more interesting situation of untrained pretenders.

The frequent dependance on empirics may be owing not only to the credulity of mankind, and their readiness to be imposed on, but often to the indolence, inattention, or little regard paid to the complaints of dispirited invalids, or an evident hesitation as to their maladies.



## CHAPTER THE TWENTIETH.

### *On Medical Partnership.*

#### Section the Sixty-Third.

HAVING carefully, and briefly traced the education, and characteristics of a Surgeon-Apothecary, together with the forms requisite for retaining acquirements; we now proceed to examine, in regular succession, the practical offices, and duties, throughout the several provinces. If the benefits, capable of being derived by an union of medical practitioners, be carefully investigated, there is no doubt, but a partnership may prove advantageous, and satisfactory, not only to the parties themselves, but also to their employers. Except methodical regulations, the interests of each party, and the means of preserving harmony be maturely considered, the main design may be frustrated. and a more limited practice be preferable.

The strongest recommendation of a Surgeon-Apothecary is usually the multiplicity of business,

that he is supposed to have, or the preference given to him by principal Families.

A fortunate event may extend fame far beyond real merit, and men possessed of greater professional skill may continue in obscurity, for want of such a lucky incident.

The practice of a beginner, conducted under the celebrated, and auspicious name of a long experienced Partner, must be an admirable succedaneum, and afford a diffident junior an expeditious, and secure introduction. In all cases, a young practitioner will gain additional confidence from invalids taking for granted, that he is acting under the governance, and assistance of an experienced colleague, on whose superior judgment such families have satisfactorily relied.

Practitioners by long experience, and observation acquire a skilful physiognomy, incapable of being learned by the most attentive studies, yet capable of being occasionally intimated by a zealous coadjutor.

When a pupil has diligently pervaded the numerous gradations in the varied practical departments, it is of no small importance, that he should have an early opportunity of applying the theoretic-



cal rules to practice, while they are in his more perfect recollection.

The counterpoise between Copartners ; the expectations of employers ; the management of deputies ; the caprice of invalids ; the officiousness of interfering connections ; and the envious opposition of professional rivals, may deserve consideration ; after the more immediate, and requisite terms, as to the agreement, or pecuniary rewards have been finally concluded.

Unless the covenant be legally, formally, and cautiously completed, unanimity can scarcely be preserved ; unless the dispositions of each associate somewhat accord, and their views be moderate, harmony can hardly be maintained.

A Partnership may be settled more readily by relationship, or previous familiarity.

When strangers are to be thus united, great caution may be requisite, and more particularly on the part of a junior. The characteristics deemed proper for a Surgeon-Apothecary, being possessed by a senior, may recommend him to the notice of a junior ; while a good temper, assiduity, a regular training, and a zeal for proficiency in the latter may prove suitable inducements, to render him eligible.

A senior commonly proposes the burden of oppressive affairs being alleviated, by taking a Partner; or has intentions of relinquishing his present concerns: whereas the motive of a junior is to procure immediate employment, and to gain a more expeditious introduction to profitable business. One party is seeking tranquillity, or retirement; the other employment, or emolumentary promotion.

Except a practitioner be circumspect in the choice of a successor, or assistant, patients will not be persuaded, merely out of compliment to an acquired favour in a predecessor, to transfer their election, or confidence.

A young man would meet with great disappointment, if his associate were unable to recommend his deserving and ready assistance; yet a junior must not forget, that he will not merit a favourable reception, unless he be diligent, and alert, in offering his services, and exerting his abilities.

Although a senior may with advantage to his associate urge his taking the labouring oar, yet there will be many exigencies, when a declining of his estimable attendance might be dissatisfactory to employers, and a loss to a junior.



### Section the Sixty-Fourth.

IT would be impracticable to state a case of partnership, that would suit every instance, there will occur peculiarities, and exceptions.

The salubrity of a place, the general character, the natural temper, the learning, abilities, and morals ; the nature and extent of business, the division of profits, the fee demanded, and the manner of its being paid, the probable speedy resignation of the whole business, or the continuance of an elder partner ; the prospect of an easy introduction of the younger associate, the fees of pupils, or the wages to assistants ; the number, the age, and situation of competitors, in the same district ; the chance of succeeding to the care of a public charity, with a variety of multifarious incidents might be stated for consideration.

If a residence precluded the enjoyment of health, the most eligible introduction would lose its value ; hence, when any such suspicion arises, a provisionary clause might be required ; and such a precaution is customary, in case of the death of either party during the fixed term of partnership.

The manners of the inhabitants, and the expensiveness of a particular situation may require deliberation.

The guardians of young men on the point of entering into partnership must be sensible of the prevalence of example, and consequently of the importance of selecting a man of respectable character, as a monitor. When a Junior becomes liable to be daily thwarted by a passionate impetuosity of a Senior, the benefits of partnership must be lost, hence it may be proper to ascertain the disposition of a colleague; while such inquiry may be no less necessary on the part of an elder associate.

As to the learning, abilities, and morals, the investigation must be reciprocally necessary; but since the parents of a candidate for partnership may be incompetent judges, the advice of a medical friend may be solicited, particularly if the inquiry be extended to the state, and value of business, the fee demanded, and other circumstances.

Unless a practitioner be regularly disciplined, and conversant with business, a young man can enjoy little advantage from such an associate, and unless he himself be possessed of learning, and



have gone through a regular course of studies, he cannot give satisfaction to an elder colleague, or his patients.

The respectful gravity, and unshaken integrity, required of every professor of the art, must render an attention to moral conduct highly requisite.

When the business is of a general nature, the introduction may be sometimes facilitated, and it may be more in the power of a youth to augment the annual receipts, by his own skill, and diligence. One of an immature age may more readily gain admission as an Apothecary, or a Surgeon, than as an Accoucheur; and such prospect may deserve more particular regard, according to the length of the term, or expected competition at its conclusion. It is customary for a young partner to pay his quota for the stock on hand.

The length of a partnership may be beneficial, and necessary, or otherwise, according to various evident circumstances. The proposed division of the yearly gains, and the share of disbursements may be material. It may be more commodious to a young man, to pay the fee by instalments, which may be previously earned, although he may receive a less share of the profits. The payment of annual sums for lives requires

more than ordinary calculation, and caution, and can rarely if ever be advised. The speculation is more unpromising, when the Senior is less advanced in years, and eager for retaining business to himself, at the end of the term. When a candidate for partnership has not ardour, and emulation, to make him solicitous, for exerting himself on all occasions, and studious for as much employment, as he can gain, he will not be likely to consider his own interest, the satisfaction of invalids, or of his associate.

It is usual for a younger partner to be expected to attend at unseasonable hours, in such instances, as patients will permit; to take the care of the Shop, Day-book, and Ledger; and to manage pupils, or other assistants, without more than occasional aid from the elder colleague.

The income of business, for the last three or five years, may be some guidance in adjusting the Fee; but the prospect, and advantages will generally overrule every other circumstance.

When rivals in business have already introduced young men of abilities, there may be greater difficulty in a young man's promotion.

A junior partner may sometimes discern a probable opening, by paying particular attention to



one branch in science, in which no other person seems to have taken a lead, and may thus render himself a valuable associate.

A Surgeon-Apothecary, who has been assiduously labouring for many years, to collect a store of professional knowledge, and to acquire extensive business, is entitled to respect; and to reward, for taking pains in the introduction, and improvement of a younger colleague.

A practitioner cannot with propriety press upon his employers confidence in any young man, however connected, unless he can be recommended for his abilities and steadiness.

In the introduction of a partner, with the hope of succeeding as a Surgeon to an hospital, the senior ought only to consider himself as a trustee, and desirous of supporting a candidate well qualified to accept the office. An elder partner cannot ask, nor a younger offer any reward on such an occasion. By the regulation of such establishments no gratuity is permitted to be received for the execution of the office, much less would it become any one, to accept a recompence for a vote or interest.

As in the indenture for an apprenticeship, so in the covenant respecting partnership, every agreement stipulated for should be circumstantially re-

cited, that each term may be clearly understood, and future litigation be entirely excluded.

The advice, and caution may be immediately, and more especially required on the part of juniors, since seniors may be supposed to be better judges. Gaming, capable of being injurious to the other partner, should be prohibited.

On the dissolution of a partnership, an advertisement in the Gazette, and Provincial Paper, may be a necessary precaution; for otherwise, each partner may continue to be deemed by law, responsible for the demands of the other colleague. An article may be proper, and there may be two copies of the agreement, or the deed may be lodged in the hands of a disinterested acquaintance.

### Section the Sixty-Fifth.

When all the terms are finally adjusted, each must resolve on adhering punctually to them, preserving invariable harmony with one another, and affording satisfaction to employers. The good opinion, and esteem of invalids must be almost insensibly procured by a younger partner, his advances must be gradual, he must rise in influence, as

“Lamps burn silent with unconscious light.”



Many patients will from pride, or want of confidence, reluctantly submit to the attendance of a junior, and he must expect some humiliating refusals. If he be willing, and ready to attend, when called on, he may often procure admission, when his place would otherwise be quickly supplied by some more active, and assiduous competitor. If a youth be dissipated, or pursue uninteresting amusements; if he be unwilling to attend as often as may be required, a colleague may be unable to aid his introduction.

An alert junior need not be at a loss for want of useful employment. The accurate arrangement of the Dispensary, and of a Surgeon's instruments; the regulation of preparatory measures for conducting business with dispatch; and the modification of suitable references, together with the tuition of pupils, may most advantageously employ the leisure of a younger Partner.

An aspiring youth will be no less vigilant in seeking for opportunities of putting his late attainments to the test of practice. Such a zeal may dispose him occasionally, to lend his aid to that class of persons, unable to provide themselves with relief; not forgetting, that such help, administered with tenderness, acts like a refreshing cordial, and will not lose its reward.

It may be instructive, to trace the *ingress* of casual *Small-Pox*, or *contagious Fever*, and to apply salutary remedies for their extermination. The performance of a capital operation may be indicated, and capable of adding materially to the comforts of a family, unable to contribute an usual fee, while the trouble of operating may be compensated for, by the improvement thereby gained, or the consequent fame. It is natural for persons, who have been cured, to expatiate on the abilities of their benefactors, and when young practitioners act, with becoming conduct, and sympathy, to Paupers, they are adding an useful lesson for qualifying them, to take the care of persons in a higher rank of life.

In the practice of an *Accoucheur*, there may be frequent opportunities of being in a more especial manner useful, to objects in the greatest distress, and in need of the most skilful treatment.

In all perplexing cases, a younger partner has a great advantage over those, that have no colleague, by the opportunity of procuring impartial advice, without fear from rivalry.

A vacancy at some charitable Foundation may give a young associate an opportunity, for becoming candidate, as a medical officer, and no small benefit may accrue from the proficiency reaped,



from the united interest of a colleague, or approbation of managers.

A detached office of this kind may teach a practitioner to act on his own opinion, and to become sensible of the great charge committed to his care; he will not however be unmindful, that his practice may still be limited, and that in rare, and uncommon cases it may be his duty to call in the aid of his official colleagues, and to submit to the safer counsel of a majority, than that of any individual.

It is incumbent on each partner to act with fairness, and candour, to study the consolation, and benefit of their employers; to do justice to their pupils; and to support the dignity of their profession; in order that they may part sincerer friends than they met.

## CHAPTER THE TWENTY-FIRST.

*On the arrangement of an Apothecary's Shop.*

## Section the Sixty-Sixth.

LET the contents of an Apothecary's, or even a Druggist's shop, be ever so numerous, let the form be what it may, it is practicable, nay easy, to range every article with such precision, that it may be instantly recurred to, clearly distinguished from any other, and with exactness be replaced ; that it may be speedily known, whether an article be contained in the Dispensary, or not, and that every beginner as a pupil, may at a very trifling cost, and with inconceivable advantage, in a week or two, renovate a shop, and become acquainted with its contents.

I can scarcely conceive any stock, that might not be beneficially ranged, so as to have a much more ready recurrence to the articles than is usual ; and when the loss of time in vain researches and the peculation so universally complained of,



are reflected on, it is the more extraordinary, that punctilious exactness in arrangements is not more studied. The perfection of an arrangement consists in its being simple, admitting with ease every necessary change ; being uniform, yet so diversified, as to make requisite distinctions incapable of being misunderstood ; in the places, vehicles, and materials being suitably adapted ; in the titles being explanatory, in the methodical plan being fully within the comprehension of all those employed, and in neatness being strictly observed. Had not literary men taken uncommon pains in the arrangement of large collections of books, what confusion must have arisen in conducting circulating libraries ; whereas the increasing numbers frequently tend to produce greater exactness ; and may it not be reasonably asked, if unerring regulations throughout an Apothecary's shop be not of much greater importance, than the disposition of a library ?

Is there any intelligent Apothecary, that would not seriously lament, and blame himself, should a composition out of his dispensary cause, or menace the death of his patient, and particularly if he reflected, that the mistake might have been prevented by a more methodical arrangement, and cautious adjustment of the contents ?

Were every Apothecary to compound his own medicines himself, like a dexterous Card-player, he might safely proceed, without farther accuracy in disposing his implements ; but as young men are generally relied on, in the night, as well as day, too often insufficiently learned to be quick in explaining contractions of titles, the arrangement ought invariably to be suited to their capacities, and management, or greater regard should be paid to their being better qualified. Upon examination it has clearly appeared, that those shops, in which masters are themselves least employed are the most immethodical, and defective ; while such as are more immediately for the use of apothecaries, that have no assistants, are found more orderly, commodious, and in all respects least objectionable ; may it not from hence be inferred that when the compounding of medicines is a chief business of an Apothecary, he discovers the necessity, and utility of method ; though when the same business is solely intrusted to juvenile compounders, who stand in need of every guidance, and every caution, they are intrusted without equal precision, or precaution ? The utility of incorporating the instruction of students with the concerns of a master has been already inculcated ; and there cannot be a more impro-



ving lesson for an apprentice than his being initiated by framing a shop and references ; that is renewing the titles, and copying the table ; besides it should constantly be remembered, that an Apothecary is wholly responsible for the errors of his deputies.

It may be possible, that a mistake may be harmless, but there may also happen a fatal blunder ; besides a very slight deviation in the colour, or form of a medicine may create distrust, or shake the future confidence of a valuable patient, incompetent to decide on the variation ; a reliance on chance, or memory, without regular forms must therefore be impolitic, if not inexcusable, when a week, or ten day's labour would permanently remedy the hazard.

When a shop is well regulated, it may be esteemed an essential rudiment, or secure initiation of an apprentice ; it may conduce to universal order, and laudable economy ; it may promote beneficial surveys, facilitate researches, and prompt the improvement of pupils ; it may preclude the misplacing of moveables, and, above all, prevent a misapplication of any one of the several articles instead of another. If an approved form were adopted at Apothecary's-Hall, and published with the London Pharmacopœia, by

the college of Physicians, their authority would give an useful sanction. Among the numerous well regulated shops that I have inspected, not one has exceeded Mr. Dale's of Liverpool, for neatness, and exactness. His scales are made after the form of balances for weighing gold, by Mr. Wilkinson of Ormskirk ; the scales are loose, and he can weigh the sixteenth part of a grain. Mr. Dale had ordered all his bottles to be made at Warrington, to suit the intended quantities. Glass is a substance of all others best calculated for many purposes, such as measures, mortars, and funnels. In one shop the neck of each bottle, and its stopple had a corresponding number. Volatile materials are best preserved by a cap, over the stopple, to screw upon the neck of the bottle.

Pots of Wedgwood's manufactory, of suitable sizes to the quantities of materials, are preferable for conserves, confections, cerates, extracts, gums, liniments, and other articles. Mortars of such manufactory are superior to metal, especially for chemical solutions. Distinct marks, and numbers on measures, and weights are useful. When vessels are exact in size, much less room is required, and all those articles in general use may be more commodiously ranged. It may be proper



never to keep any large quantity of a poisonous, or even powerful drug, compound, or other preparation within easy reach; but for common use, to have such medicines in very small bottles, nor should either vessel be without a token to caution the juvenile compounder, such as a double label of a different shape, or some have changed the form of the vehicle. There are many of the contents rarely demanded, which may be placed at a distance.

The exactness, or minute regulations necessary for the guidance, and caution of young apprentices, cannot be discovered but by frequent examinations of all the contents, their places, and uses. Although in the common arrangement of an Apothecary's shop many defects might be recited, yet it must be acknowledged, that the new nomen-

the various ingredients, or compound medicines with safety in the absence of their masters.

The similarity of names for compositions of a mild, and powerful nature, as preparations of Hydrargyrus, and Opium, render clear discriminations absolutely necessary.

The purposes to be obtained, on reflection appeared to be, a distinction of the quarters of the shop, of the shelves, and of all the articles in each partition; and a diversity of the colour, size, or form of the labels in every row, throughout the shop.

The abolishing of painted titles seemed to be a requisite alteration, as they were found to be a principal cause of vague, and unmeaning names, or of concealing useful, and necessary appella-



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The exactness, or minute regulations necessary for the guidance, and caution of young apprentices, cannot be discovered but by frequent examinations of all the contents, their places, and uses. Although in the common arrangement of an Apothecary's shop many defects might be recited, yet it must be acknowledged, that the new nomenclature seemed to require more particular accuracy, and caution in disposing the several articles.

One of the most frequent objections is the continuance of obsolete names, another is an article that is seldom used being placed under some different title, or out of conspicuous view; one is a want of diversification in the labels of every row, another is the difficulty of ascertaining particular articles, or with certainty replacing them; and lastly young men with great difficulty find

the various ingredients, or compound medicines with safety in the absence of their masters.

The similitude of names for compositions of a mild, and powerful nature, as preparations of Hydrargyrus, and Opium, render clear discriminations absolutely necessary.

The purposes to be obtained, on reflection appeared to be, a distinction of the quarters of the shop, of the shelves, and of all the articles in each partition; and a diversity of the colour, size, or form of the labels in every row, throughout the shop.

The abolishing of painted titles seemed to be a requisite alteration, as they were found to be a principal cause of vague, and unmeaning names, or of concealing useful, and necessary appellations; to the prejudice of masters, as well as pupils, and to preclude the most ready, or advantageous method of initiating young men, and giving them a taste for their profession. This must be obvious to those, who are acquainted with the changes of titles, needful, from some remedies falling into disuse, and new medicines being introduced.

Practitioners, who have not considered the subject thoroughly, cannot be aware how many charges are unnecessarily incurred by obsolete titles



or articles being hidden, and forgotten, and consequently of the savings capable of being derived from adopting the proposed plan. Young apprentices stand in need of the most plain directions, are much benefited by being early engaged in facilitating their own proficience, and being made sensible of their progress; and if they be not methodically instructed, and carefully warned of the important nature of the materials in their custody, and use, they cannot deservedly be censured for mistakes. While young men are by such forms initiated, preceptors are imperceptibly prompted to remarks highly improving to pupils, and eventually advantageous to themselves.

### Section the Sixty-Seventh.

ALTHOUGH so long ago as January 1788, the college of Physicians commanded by proclamation the general use of an amended pharmacopœia, perhaps unequalled in elegance of language, correctness of chemical composition, and significance of titles, the shops of Apothecaries were slowly arranged, and many still remain defective as to the conformity which seemed to be implied.

I not only took it for granted, that it was my duty to comply with the precept, but I thought it

incumbent on me to take the earliest opportunity of teaching my pupils a clear comprehension of the new names, at the same time to avoid confusion as to the old ones. The imperfect arrangement of my shop had not before sufficiently excited my attention, though I had bestowed much pains in framing methodical forms for the surgical department, which perhaps furnished in some degree the following, as well as preceding hints for a general reformation. Having, with others, for several years experienced the practicability and advantage of this formal directory, and precaution, I am induced to urge the trial of it, with such improvements as may occur to an ingenious Apothecary. *Am* I hope that this methodical plan may be a guidance for surgical forms, I am less studious in avoiding prolixity.

Sketches of such a shop as seemed to include the necessary variations were drawn, and corrections were made as they occurred at each examination of the contents. It was deemed proper to purchase an engraved plate, on one side of which was a form for the largest sized labels, and on the other one for five smaller; and these being of different shapes, were intended to make changes in six partitions.



Stained papers of six distinct colours, as well as white paper, were then selected; and in order that a sufficient number of different sorts of labels might be had, for as many rows as there might be, variations in the decorated parts of each engraved form were contrived. A label to suit the size of a vehicle on each shelf was then fixed on, a strict regard being paid, that the mutation should be so striking, as to be obvious to any indifferent beholder.

The shop, after being cleaned, was then divided, by placing in the centre of each side, NORTH, SOUTH, EAST, or WEST, in capital letters. Each of the shelves was then in like manner distinguished by a large letter, beginning at the top of the North Quarter, proceeding to the East, from thence to the South, and lastly to the West; and when the alphabet was finished, then double letters were used.

The various blank labels were not written upon until the names for every row in one, the North, Quarter had been noted down, repeatedly revised, and approved; and in this part of the execution, the apprentices were sensible of gaining much instruction, in addition to its impressing on their memories the distinct and invariable places of articles. It is in the abridgment of the titles for

labels, that so much attention is required, to preserve the most essential part of the title, rather than expatiate on such part of it, as cannot be mistaken, and is generally understood; such as powder, tincture, or other form, and omitting to elongate some important character, as *muriatic: fort:* and adding some subjoined mark. When the labels for the North Quarter had been copied, revised, and approved, they were, by mucilage of Gum Tragacanth, pasted upon the proper vehicles; and when these had been correctly, and satisfactorily ranged, a number was inserted, on such part of the label as rendered it conspicuous; which determined the place of every distinct article in the same partition. It need scarcely be added, that equal pains were taken to finish the remaining Quarters, with as much exactness and regularity, observing the rules already insisted on.

Left any risk should be endangered from too precipitate a change of names, the old titles were preserved at the back, or in some ready part to be occasionally compared. Care was taken not only to contrive the most commodious places for material contents, but also for the most common necessaries, remembering that the misplacing of the latter may be equally vexatious; and when articles could not be themselves labelled, as bladders, or



scissars, a label, and number were put upon their respective places, or over the nails on which they were to be suspended.

Notwithstanding the greatest circumspection, many errors were by degrees detected, which again pointed out the preference of coloured paper to painted labels, that would not have admitted the same easy mutations; and invited the framing of a reference Table, by which the names, and places might be more perfectly known.

The incongruity, or discrimination of one partition from any other throughout the shop was found to be such as made a young man ashamed to misplace any article, because he was liable to the censure of any visiter, totally unacquainted with the profession.

It was necessary for me to be at an expence which other Apothecaries may avoid, the purchase of an engraved plate for the labels; for Druggists have offered their readiness to furnish ornamented blank labels on coloured or plain paper.

### Section the Sixty-Eighth.

HAVING completed the disposal of the contents throughout the dispensary, and finding the number about five hundred, there seemed to be a

## NORTH

[illegible]

SOUTH.



R T H.

to Reference Table of New Names, suspended in the fourth.

EAST.

In a Quart bottle, Tinctur. opii.	( 1 )	( M )	Molchus	( 2 )					
Ether. vitriolic.	Liq. corn. cerv. vol.	Sp. aether nitros.	( N )	Mucilag. e Gum. arabic.	( 1 )				
			( O )	Sp. aether. vitriolic.	Sp. aeth. vitriol. compoist.	Tinct. opii			
1	2	3	WINDOW.	4		6			
Cirrus medica.	Nail for shears	N. for scissars	Glass measure	( P )	Pewter measures small.	Pewter pint & quart.	Scissars.	Funnels	
1	1	2	3	( Q )	4	5	6	7	8
	Weights and scales,	large size	COUNTER.	4	Weights and scales in a Box				
	1	2	DRAWERS.	7					
Knives & spatulas.	Writing paper different sizes.	Whole paper	( Q )	Cap paper cut & uncut.	Corks.	Bladders.	Pill boxes & flour		
	4	5	6	( Q )	7	8	9	10	
Tow.	Lint.	Leather.	DRAWERS.	Sponges.	Towels.	String.			
11	12	13	( Q )	14	15	16			
Receptacle for dirty water,	and cistern for clean.	CLOSET.	Frame for dividing Pills.	Tiles for boylfies.	Foul Towels				

Antimon. calc.	1	Antimon. mur.	2	Antim. tartarizat.	4	Ant. vitrif.	5
ARSENIC.	1	Ferr. ammon.	2	Ferr. vit.	4	HYDRARG. MURIAT. Fort.	5
Cerufs. acet.	1	Hydrarg. acet.	2	Hydrarg. calcinat.	4	Calomelas.	5
Stannum.	1	Sulph. antim. precipitat.	2	Sulph. precipitat.	5		
Pulv. aloes cu Ferro.	1	P. antimonial.	2	Cardamin.	3	Canthar.	3
Ammon. mur.	1	Amm. prap.	2	Lixiv. vit. sulph.	4	Magnes. ulf.	5
Pulv. arabic.	1	P. aromat.	2	Canc. ch. comp.	3	Canel. alb.	4
Arg. vit. ulf.	1	Bol. gall.	2	Camphor.	3	Canc. ch. prap.	4
Extr. cinch. rel.	1	Colocynth. comp.	2	Gentian.	4	Hæmat. campech.	5
Aq. calc.	1	Dilliat.	2	Sp. cinnam.	3	Sp. lav. comp.	4
				Sp. myrrh.	5		

(3) Slate and Pencil. New Nomenclature, or Reference Table



# An Alphabetical LIST of the CONTENTS

The abbreviations Q. S. N. denote the same  
Titles as in the first Columns.

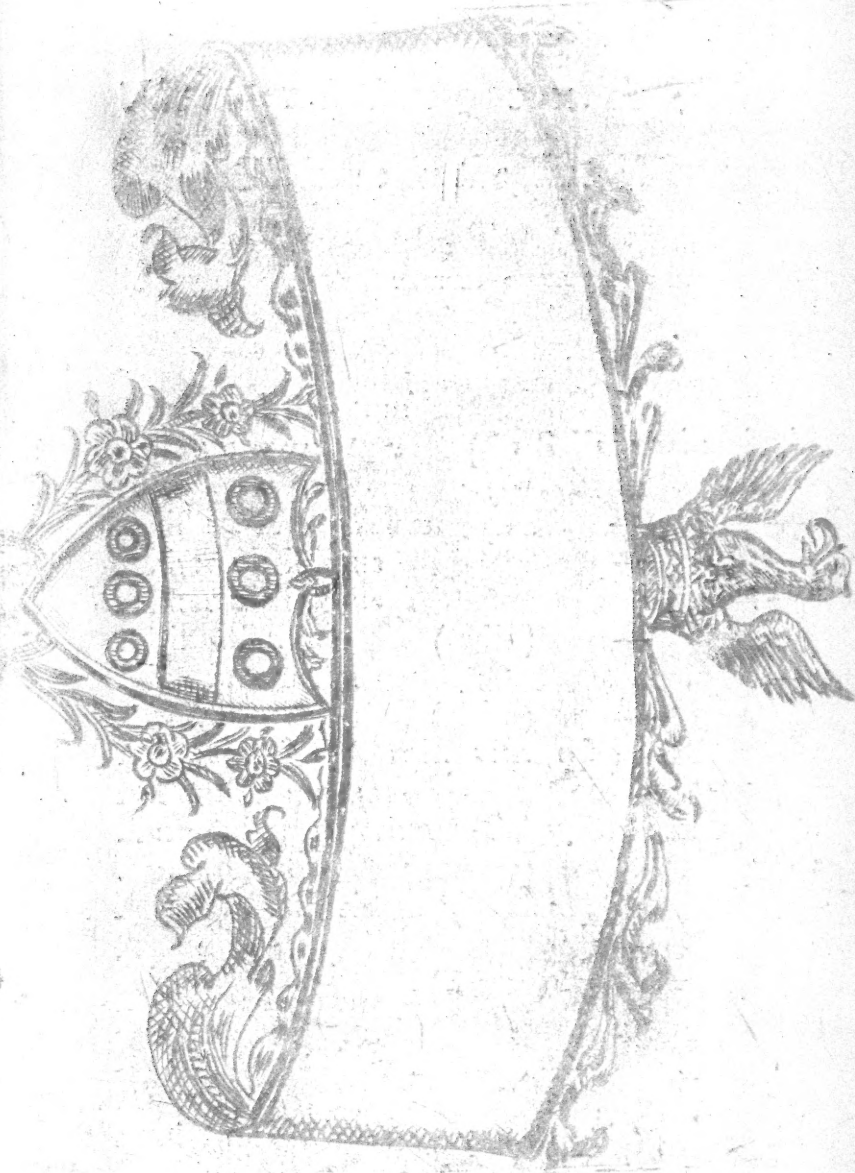
Small Letters explanatory of the Quarter of the Shop in which each Article will be found.	Letters denoting the Shelves or Partitions.	Number of Articles in each Partition.	Q.	S.	N.	
Acetum distillatum	s	AB	8			Ledg
Acidum <i>uriatum</i> (Sp Salis marin glaub.)	n	B	1			Lint
Acidum <i>nitrosum</i> (—Nitri glaub.)	n		2			Limo
Acidum <i>vitriolicum</i>	n		3			Liqu
Ether vitriolicus	n	B	4			Lixiv
Ether vitriolicus	e	O	1			Magn
Allium fativum (radix)	n	H	1			
Aloe socotorina	n	G	3			
Althæa (radix)	n	H	2			
Alumen ust. (Argil. vitr. ust.)	s	Z	1			
Ammonia muriata	s	X	1			
Ammonia præparata (Sal vol. fal ammon.)	s	X	2			
Ammoniacum (gummi)	n	G	4			
Amygdala dulcis (nucleus)	n	G	1			
Amylum	n	G	2			
Angustura (cortex)	w	AF	1			
Anethi semen	n	I	5			
Anthemis nobilis (Chamæmel. flos)	n	I	8			
Antimonialis Pulvis	s	V	2			
Antimonii Crocus	s	R	6			
Antimonii Vitrum ceratum	s	R	7			
Antimonium calcinatum (Calx antimon.)	s	R	1			
Antimonium muriatum (Causlic. antimon.)			2			
Antimonium præparatum			3			
ANTIMONIUM TARTARISATUM (tart. emet.)			4			
Antimonium <i>vitricatum</i>			5			
Aqua ammoniæ acetatæ (Sp. minderer)	n	E	1			
— ammoniæ puræ (Sp. falis am. cu calce)	n	B	5			
— calcis (simpl.)	s	AB	1			
— distillata	n	AB	2			
— distillata	n	E	2			
— Kali præparati (lixiv. tartari)	n	B	6			
— Kali puri (lixiv. faponar.)	n	B	7			
— Lithargyri acetati composita (faturnina)	n	E	3			
— Menthæ pipertidis			4			
— Pulegii			5			
— Pura			6			
— Rosæ (rosarum)	n	B	8			
— Zinci vitriolati	n	B	9			
Arabicum gummi (Mimosa nilotica)	n	G	5			
Argilla vitriolata usta (aluma-en ust.)	s	Z	1			
Argentum nitratum (Causlic. lunare)	s	R	8			
Arnica montana	n	I	1			
ARSENICUM	s	S	1			
Asæfætida (gummi refina)	n	G	6			
Balsamum canadense (Pinus Baljamea)	n	A	1			
— Peruvianum (Myrox. perulferum)	n	A	2			
— Tolutanum (Tolulifera balsamun)			3			
Bladders	e	Q	9			
Bleeding Cups or Tins	w	AH	4			
Bolus gallicus	s	Z	2			
Borax vide Natron	s	Z	8			
Bottles	w	AH	1 2			
Calamus (Acorus aromaticus)	n	H	3			
Calomelas (dulcis sublimat.)	s	T	4			
Calx Hydrargyri alba (Merc. præcip. alb.)	s	S	6			
— cu Kali puto (Causlicum com. fortius)			7			
Camphora (Laurus camphora)	s	Z	3			
Cancr. Chel. prep.			4			
Canel. alba (cortex)	s	Y	4			
Cantharis (Meloe vesicatorius)	s	V	4			
Capficum annuum (Piper Ind.)	n	I	2			
Cardamine (pratensis)	s	V	3			
Cardamomum (amomum repens vide Tinctura)	n	K	4			
Castoreum rufficum	s	V	5			
Catechu (mimosa-Terra japonica)	n	K	5			
Cera alba	n	Y	5			
— flava		F	1			
Ceratum Ceræ			2			
— Lithargyri acetati			3			
— Saponis			4			
Cerussa acetata (Sacharum Saturni)	s	T	5			
			1			
Chamæmelum						
Cicuta (vel Conium maculatum)	n					
Chelæ Cancrorum preparatæ	n					
Cinchona (cort. Peruvian.)	s					
Cinnamomum (Laurus Cin. Cortex)	w					
Citrus Medica (Limon)						
Coccinella	e					
Colocynthis fructus (Cucamis Colocynth)	s					
Colomba (radix)	s					
Confectio aromatica (cardiaca)	n					
— opata (Philon. Londinense)						
Conium maculat. (Cicuta)	s					
Conserua Corticis exter. aurantii hispalensis	n					
— Cynosbati (Ros. canin. fruct.)						
— Rosæ						
— Scillæ						
Contrayerva (radix)	s					
Corks	s					
Cornu Cervi ustum præp. (calcinat)	e					
Cortices, vide Angustura, &c.	s					
Counter	w					
Crocus antimonii	e					
Crytalli Tartari	s					
Cuprum ammoniacum	s					
— vitrificatum						
Day-book						
Daucus sylvestis (Daucus Carota)	w					
Digitalis fol. pulv. (purpurea)	n					
Electuarium Sennæ (Electuarium Leneivum)	s					
Emplastrum Cantharides	n					
— Ladani compositum (stomachicum)						
— Lithargyri (commune)						
— Lithargyri cu refinâ (ad hæcivum)						
Extractum vide Suc. Cicut. (Conii mac.)	n					
— Cinchonæ cu refinâ	s					
— Colocynthidis compositum (cathar.)						
— Gentianæ						
— Hæmatoxyli (lign) campechense						
— Papaveris albi						
Ferrum ammoniacale (Flor. Martial)	s					
— tartarisatum						
— vitriolatum (Sal Martis)						
Fistulæ eborneæ	n					
Flores	n					
Folia cicut. digital. nicotian ros. senn. (uva urfi)	n					
Fruct ann. caps (vel Pip. Ind.) cynorb.	n					
Funnels	e					
Galbanum (gummi refina)	n					
Gentiana (radix)	n					
Glass broken	w					
— measure marked by drams and ounces	e					
Granatum cort.	w					
Guaiacum	n					
Gummi	n					
Hordeum perlatum semen	n					
Hydrargyrus acetatus	s					
— albus vide calx (merc. præcip. alb.)	s					
— calcinatus (merc. calcin.)	s					
— cum creta (merc. alkalizat.)						
— MURIATUS (merc. Corrosiv. subl.)	s					
— muriat. mitus (merc. præc. dalc.)	s					
— nitratus ruber (merc. corros. rub.)	s					
— purificatus (argent viv. purif.)	s					
— cu Sulphure (æth. mineral)						
— vitriolatus (merc. EMBT. flav.)						
Jalapium (radix)	n					
Ipecacuanha (radix)	n					
Kali acetatum (sal diureticus)	n					
— præparatum (sal absinthii vel tartar)						
— purum (alkali veg. fix. CAUSTIC)						
— sulphuratum (hepar sulphuris)						
— Tartar						
— vitriolatum (tartar. vitriol.)						
Kino (gummi gambiense refina)	n					
Knives	e					
Labels Blank	w					
Leather	e					



# TS of an APOTHECARY'S SHOP.

	Q.	S.	N.		Q.	S.	N.
Ledgers	w	A D	2	Rubia tinctorum (radix)	n	H	9
Lint	e	Q	12	Sal cornu cervi	s	X	9
Limon. vide citrus medica	e	P	1	— succini	s		10
Liquor. vol. cornu cervi (sp. corn. cerv.)	n	D	1	Sales varii vid. kali lixiv. vitr. natron, &c.	n	J	
Lixivatriolata sulphurea (fal polychrest)	e	O	2	Sambuci bacca vide succus	s	X	8
Magnesia alba	s	X	3	Sarsaparilla (radix incisa)	n	C	10
— vitriolata (fal amar. vel cath)	n	J	7	Scammonium (gummi refina)	n	H	12
— usta (calcinata)	s	Z	8	Scales	n	G	2
Manna	s	X	4	Scissars	e	P	2
Measures	n	G	16	Senna (folium)	e	P	7
Mel despumatum	e	P	3 ad 6	Serpentaria virginiana (radix)	n	I	9
— Rosæ (rosaceum)	n	C	11	Slate and Pencil	n	H	11
Mofchus	n	A	4	Shears	s	A C	3
Mucilago Arabic. gummi	e	M	2	Soda phosphorata	e	P	1
Myrrha (gummi refina)	e	N	1	Spatula, see knives	s	X	11
Natron Boracicum (Borax)	n	G	11	Sponges	e	Q	4
— præparatum (fal Sodæ)	s	Z	7	Spongia usta	s	Z	14
— tartarifatum (fal Rupellenf.)	s	X	5	Sperma cæti	s	Z	12
— vitriolatum (fal cath. glaub.)	s	X	6	Spiritus ætheris nitrosus (nitri dulcus)	s	D	9
Nicotiana (fol.)	n	I	7	— ætheris vitriolici (sp. vitr. dulc.)	n	D	2
Nitrum purificatum	s	X	3	— ætheris vitriolici compositus (liq. Hoff.)	e	D	3
Oleum amygdalæ	n	J	8	— ammoniæ compositus (vel. aromat.)	n	D	4
— anis feminis (essentiale)	n	A	9	— camphoratus (sp. vin. camph.)	e	D	4
— caryophylli	n	A	6	— cinnamoni (aq. cinn.)	n	D	5
— juniperi	n	A	7	— lavendulæ	s	A B	5
— menthæ sativæ (vulg.)	n	J	8	— lavendulæ compositus	s	A B	7
— olivæ	n	J	10	— myristicæ (aq. nuc. mosch. sp.)	n	D	3
— e feminibus ricini	n	J	11	— pimento	s	A B	4
— rorismarini	n	A	10	— rorismarini	s	A B	9
— succini rectificatum	n	A	11	— vin. rectific	s	A B	5
— terebinthinæ rectif. (spir. Tereb.)	n	A	12	Stannum	n	D	6
Opium purificatum (extr. Tehebaic)	n	J	4	String	s	A B	11
Oxymel Scillæ (scilliticum)	n	A	5	Succus baccae sambucci spissatus (rob. Samb.)	e	U	1
Peruvianus cortex vide Cinchona	w	A F	2	— conii mac vel cicutæ spiff. (extr. cicut.)	n	Q	14
Pans	w	A H	5	— ribis nigri spissatus	s	C	8
Papers of different sorts and sizes	e	Q	5 6	Sulphur antimonii præcipitatum	s	U	9
Pill Boxes and Flour for Pills	e	Q	10	— præcipitatum	s	U	10
— frame for dividing	w	A E	16	— flos	n	E	2
Pharmacopie	w	A E	1	Syrupus papaveris albi (e meconio)	n	E	4
Prescriptiones medici	s	A A	6	— sachari purificati (simp.)	n	E	9
Pilulæ ex aloë cu myrrha (rufi.)	s	A A	7	— spinæ cervinæ (baccæ)	n	K	7
— ex Hydrargyro (mercurial)	s	A A	8	Tinctura fabinæ comp. (elix. myrrh.)	n	K	1
— ex opio	s	A A	9	— assæ fætidæ (ferulæ)	n	K	2
— e scilla	s	A A	9	— balsami tolutani	n	K	3
Pulvis aloeticus cu ferro (Pilul. exphractic.)	s	V	1	— cardamomi composita (stomachic)	n	K	4
— antimonialis	s	Y	2	— catechu (japonica)	n	K	5
— arabici	s	Y	1	— cinchonæ	n	K	6
— aromaticus (species aromaticæ)	s	Y	2	— cinchonæ composita	n	K	7
— cancrorum chelarum compositus	s	Y	3	— cinnamom composita (aromatic.)	n	K	8
— cannellæ albæ	s	Y	4	— columbæ	n	K	9
— floris cardaminis	s	V	3	— guaiaci ammoniata (vol.)	n	K	10
— Cantharis	s	V	4	— opii camphor.	n	K	11
— Castorei ruff.	s	Y	5	— opii (thebaica)	n	K	6
— catechu (ter Japon)	s	Y	5	— valerianæ ammoniata (vol.)	n	K	12
— cicutæ folli vel conii mac.	s	V	7	Tiles	e	O	12
— cinchonæ (cort. Peruv.)	s	Y	6	Thus (refina)	n	Q	17
— coccinellæ	s	V	6	Tormentil (radix)	n	Q	13
— contrayervæ simplex	s	V	8	Tragacanth (gummi)	n	G	12
— contrayervæ compositus	s	Y	7	Trochisci magnesiæ	s	A A	14
— cretâ compositus (e Bolo sinc. opio)	s	Y	8	— sulphuris	s	A A	10
— cretâ compositus cu Opio	s	V	9	Tow—Towels	e	Q	11
— croc fligyma. (flores croci)	s	Y	10	Unguentum adipis suillæ (simp.)	n	F	11—13
— guaiaca	s	Y	9	— hydrargvri fortius (cæcul. fort.)	n	F	10
— jalapii	s	Y	11	— hydrargvri nitrati (citrin)	n	F	11
— ipecacuanhæ	s	V	10	Valeriana sylvestris (radix)	n	H	12
— ipecacuanhæ compositus	s	V	11	Uva ursi folium (arbutus uv. urs)	n	H	13
— myrrhæ compositus	s	Z	12	Vinum antimonii (antimoniale)	s	U	8
— opiatu	s	Y	13	— ipecacuanhæ	n	B	10
— rhei palmati	s	Y	12	— Opii	n	B	11
— sabina	s	Z	11	Vials of all the different sizes	n	B	12
— e fennæ compositus	s	Y	13	Vitrum antimonii ceratum	n	A G	
— uvæ ursi	s	U	8	Weights	w	R	7
— e tragacanthâ compositus	s	Y	14	Zincum calcinatum (flores zinci)	s	Q	3
— valerianæ	s	Y	15	— vitriolatum (fal vitr.) vel vitrol. alb.	s	U	5
Quassia (cort.)	w	A F	5				6
Quercus (cort.)	n	H	6				
Radices vid. allium. althæa. calam. colomb. &c.	n	H	8				
Rheum palmatum	n	C	8				
Rob sambuci bac. vide succus	n	I	8				
Rosæ gallicæ petulum (rubr. fol.)	n	I	10				









necessity for some method of ascertaining quickly whether an article were contained, or not, and also its immutable place. Accordingly an alphabetical list of every thing included in the shop, even the most trivial, as well as the most important was taken, and when made satisfactorily correct, drawing paper, as it is termed, was procured of a sufficient size to contain the catalogue with three additional columns; to denote the *QUARTER of the Shop*, the *LETTER of the Shelf*, and the *NUMBER*, or part of the shelf on which the *article* searched for, would be found; as will be more particularly seen by the annexed Table.

Except great pains be bestowed in perfecting the rough draft this useful form must be comparatively of little use, as the lines, in which the entries are made must be throughout correct, and corresponding; or if many corrections become requisite, the Table, which ought to be neat, and an unexceptionable guidance cannot be looked at with pleasure: as the Plans will explain.

To this Table containing only the new titles was subjoined a similar list of the old ones with a reference to the new Nomenclature.



## CHAPTER THE TWENTY-SECOND.

*On the Office of a Practical Apothecary.*

## Section the Sixty-Ninth.

THE opportunities of obtaining an eligible partnership must be comparatively few, and although, under the sanction of an able, and cautious coadjutor, many humiliating, and vexatious occurrences may be avoided, yet without a fortunate choice, an entrance on the profession, without an associate, may be preferable. When a beginner in practice acts without a Colleague, there will be many considerations required, besides the regular discipline, and general characteristics already enumerated; besides the records for retaining knowledge, and the formal arrangements of passive implements.

Although it be deemed most expedient to inquire into each of the provinces distinctly, yet the design is principally to treat of the qualifications of a Surgeon-Apothecary, hence many observa-

tions may be found to refer to the collective Branches.

It is to be wished, that a young man might commence practice without pointed opposition ; and indeed the malevolence of rivals seldom proves of real benefit to the party confiding on superior claims. It must be for the credit of the profession, that medical men should avoid intermeddling with each other's concerns, as it must provoke litigation ; and they should endeavour to preserve such a friendly intercourse, as to assist each other, in cases of exigency, both liberally, and disinterestedly.

An opportunity of having seen more extensive practice in one department than another, or a taste for some peculiar part of the science may have better qualified a young man for prosecuting a particular branch ; and such a determination may sometimes render an additional practitioner less obnoxious to others of the same profession.

By a long continuance of practice, one may have attached himself to a single province, and thereby afford a more general practitioner an opportunity of prosecuting other branches without creating jealousy.

When a young man has made himself tho-



roughly acquainted with professional adjuncts, he may find one or other of them a most useful introduction.

Those who have had a liberal education, have served a regular apprenticeship, and have diligently pursued a full course of subsequent studies are too often led to conclude, that they must be perfect masters of the art; and no doubt, but, by having had able teachers, and having sedulously applied, they will have essentially paved the way to satisfactory proficiency.

A disappointment of sanguine expectations, of premature hopes, will occasionally convince young men, that their success must be, by permanent attention, and study, rendered satisfactory.

On the commencement of practice, the department of an Apothecary is generally a primary step, and since a fortunate setting out in business, or an early good opinion is of moment to future preference, the conduct to be observed by a beginner must be important.

However shining the apparent qualifications of a young practitioner may be, however promising the situation, or extensive the interest of relatives, little encouragement can be expected, but by a

successful treatment of maladies, and a gratifying management of invalids.

### Section the Seventieth.

AMONG the primary considerations of a juvenile practitioner the residence is a material one, on which a propitious procedure may depend. The town in which, an apprenticeship has been creditably served, or relations, and friends dwell, may be on that account more eligible. When sure a practitioner is lately dead, or if any one has declined, or be willing to relinquish business, such a situation may be desirable. The advice and approbation of a parent, the recommendation of a late master, or a professor, may be highly beneficial.

As soon as a young practitioner is fixed in an approved habitation, he naturally becomes anxious to promote his advancement, success and profit. The advice given on such occasions, by men of experience, is often so adverse to the sanguine notions of youth, as to render it unwelcome, and irreconcilable to their minds. It is a business of exigency, and consequently requires strict confinement. If a practitioner be found wholly engaged in the most laudable professional



pursuits, at the time his attendance is summoned, such studious vigilance cannot fail to prove an irresistible recommendation.

### Section the Seventy-First.

THE first and most necessary step for a young Apothecary must be the arrangement of a shop; the principal considerations in which must be the easy discovery of its contents, and the safe administration of the several articles, should the management be occasionally intrusted to others. Having already expatiated on this instructive topic, I shall not add further, than that in proportion to the completion of such a form, a practitioner will have more leisure for other, no less essential, regulations.

A selection of the best drugs, and the most genuine articles may materially contribute to the success of a beginner. Those, who deal in drugs, and chemicals, are adepts in shewing their articles to the best advantage: hence it is of consequence, for a young Apothecary to be competent in deciding on the excellence of ingredients, or compositions, and not solely relying on the recommendation of an interested vender. By the instructive lectures he attended on the *Materia Me-*

dica, and on Chemistry, it is to be hoped, he will have been furnished with necessary information; and he will scarcely, for the sake of seeming cheapness, purchase less efficacious remedies. Punctuality in payments may induce Druggists to act with greater impartiality. A frequent survey of the various articles will be found necessary, to prevent injurious changes, or unsuitable places, and an orderly disposal invites the inquiry.

Besides exotics, and the articles commonly purchased by Apothecaries, there may be various officinals, necessary to be collected at stated seasons, a knowledge of which may have been attained by Botanical studies, and this subject may recommend itself as a pleasant amusement in summer.

The chemical experiments seen at lectures, may induce a young Apothecary to prosecute, at times, the subject of chemistry; especially to bear in mind, the uses of the new aerated preparations, Oxygen, and Hydrogen. Great caution may be necessary, in avoiding the preparation of too great quantities of compositions, lest they should be spoiled, and by way of ascertaining exactness, it may be useful to annex the date and weight of every composition, as soon as it is made.



It is extremely unfortunate, when young men begin practice, without having acquired the new Nomenclature, although it may be required of them to retain also the old names; not only their ignorance is liable to be exposed, but invalids may suffer by the delay. Since the publication of the new Dispensatory, a young Apothecary, that had served his apprenticeship in a large town, returned a prescription for a saline draught, alleging that his shop did not contain the ingredients; a strong argument for the necessity of being well-grounded in common parts of science; the prescription was of course sent to another Apothecary. Future proficiency requires prior information having been gained.

The instruction, with which the modern appellations are replete, gives them a decided preference.

The perplexity, accruing to Apothecaries, or rather to their apprentices, from prescriptions being sent to them in exploded, or mixed, instead of reformed characters, must frequently create a discordant jumble, if not endanger the lives of invalids.

It cannot but reflect discredit on every Apothecary to be unacquainted with the decyphering

of a prescription, this difficulty should therefore be early surmounted.

The avoidance of all mischievous accidents is a necessary precaution for a young Apothecary, and on this account every powerful medicine should have a bottle, or other material, of a small size, with a cautionary token to warn the compounder. Although a Beginner may have no assistant, yet as such a one may hereafter be required, the shop ought to be arranged in such a form, as to admit of a youth refitting it, without any objectionable change. However small the quantity of articles may originally be, yet a reference Table should be preserved as a Directory, since such regularity is a superstructure, for other proposed methodical regulations.

There is not a more improving task, for initiating a young Apprentice, than interrogating him on the abridged titles, until he be perfected in a knowledge of the terms at length; while such lessons afford an intelligent master opportunities of subjoining instructive explanations, and cautions.

The Day-book, and Ledger of a young practitioner being neat, uniform, and well calculated



for the most easy researches of himself, or any assistant he may have, must be essentially necessary.

The forms have been already hinted in the chapter on apprenticeship, and a young man has generally much leisure.

A Beginner employed in regulating his shop, and contriving convenient books for daily entries, not only anticipates a preparation for exigent occasions, but may derive considerable advantage, by being in readiness, and found, by curious inquirers, engaged in useful pursuits.

Allowances, and indulgences may be granted to men of long experience, and established confidence, should they be absent when materially wanted ; but a Beginner could not avail himself of the same privilege, should his attendance be solicited during his pretended avocations. The primary calls, or the first steps to promotion, are often cases of exigency, when ordinary practitioners cannot be timely procured, and the treatment is commonly of great importance, besides it may be subject to the observations of a jealous competitor.——A regular list of all patients must be daily transcribed.

A young Apothecary will soon learn the benefit of having his shop in due order ; and also of

having spent his vacant time, in presupposing such diseases, as may demand a quick decision; and collecting the best treatment extant.

### Section the Seventy-Second.

ALTHOUGH much permanent intelligence may have been derived from systematical lectures, yet farther improvement may be reaped by an accurate and distinct classification; by way of affording a separate thesis, for obtaining all the additional information, capable of being collated from writers on the subject, or from the periodical works, and interspersed hints of other authors. The appropriation of a young practitioner's vacant hours to such useful inquiries must be the most probable method of counterbalancing his inexperience, and providing him with a satisfactory synopsis. It is not proposed to crowd one study upon another, the cases that occur may often point out a topic for present attention; but as a young man must cautiously conduct himself in external demeanour, and the management of his family, as well as be apprized of many unavoidable occurrences, we shall leave professional acquirements to examine these heads.

A beginner in the profession should not be in-



different, as to what the public may think of his behaviour ; and, as tuition is usually a part of a professor's business, he ought to take into consideration, the necessity of his whole conduct being methodical, and exemplary, in order, that he may better persuade his pupils to observe his rules.

A master, and if there be an apprentice, both should make every necessary preparation, for the transaction of each day's probable business.

Exactness in a practitioner's family may not only be highly advantageous to himself, but satisfactory to his employers. The steadiness of pupils, and servants ought to be insisted on, for when persons, who are seriously indisposed, send a messenger, requiring a practitioner's attendance, he is usually interrogated on his return ; and in proportion to the care, and regularity observed by the person, who received the message, greater punctuality is expected. On such occasions, a careless levity would give umbrage ; without a proper entry be made, by trusting to memory the name of the person or place may be mistaken, or other particulars may be omitted ; and unless explicit regulations be framed by a master, subordinate attendants will seldom give general satisfaction.

A practitioner may find it necessary to pry into the manner of such dependants' behaviour during his unavoidable avocations, for invalids will be very scrupulous in taking medicines from the hands of a dissipated youth, or have any reliance on a gay, and intemperate assistant. Since an offended party cannot have any other rule of judging, the slightest deviations will often be magnified into impardonable errors.

### Section the Seventy-Third.

A Practitioner should at the onset guard against excess in entertaining company, or paying visits, as it will be prudent for him to live within his income. Much company occupies too much time, and renders professional attainments, that would be otherwise amusing, irksome; besides invalids become apprehensive, that their complaints may, in jocularly, become a topic of conversation; one distressed in his finances cannot be equally fitted for deliberation, and the propriety of a practitioner paying regard to his own health must be suggested by a knowledge of the various maladies produced by indiscretion, and intemperance.

A family may no doubt be better conducted by a prudent wife, who may also assist an introduction to professional business; yet the late Dr.



Fothergill used to argue, that unmarried men were usually more laborious in improving the art, and that the prejudices of patients might be surmounted by steady conduct, unremitting application, accomplished manners, and unchangeable confidence.

The dress of a young Apothecary may not be altogether undeserving his consideration ; ridiculous formality, disgusting foppery, or heedless slovenliness, may equally indulge a caviller, and render attendance unsatisfactory to invalids. It is convenient for a practitioner to be able to shave himself, and dress his own hair, that he may always be soon prepared to answer a summons.

In country practice it is generally the custom to keep one or more horses, for the sake of visiting patients with requisite expedition, and this convenience abounds with advantage to such as may from sudden and dangerous complaints, require attendance in the night. It is of consequence, that a practitioner should be safely mounted, but young men are most apt to be captivated by a horse's shewy figure, than his intrinsic perfections, and yet changes are often seriously expensive. Caveat emptor, as Horace observes, and the rule, which I found useful, was to make choice of an active horse, of a sufficient age to

sustain the customary employment, and of strength enough to carry a much heavier person than myself.

Practitioners in general seem to be seldom interestedly apprized of all the charges of keeping horses, in settling the fees for country visits, hence it would be advisable to balance such accounts annually.

It is I know a general notion, that an Apothecary's drugs cost little, because they may be purchased from a Druggist at a cheaper rate, without adverting to the necessary distinctions. The drugs sold by the vender of them, may be under the same name of very inferior value, yet however inefficacious may escape blame; but a practitioner ought, in his charges, to estimate, and include his education, his improvement, his time, and responsibility for efficacy; and then the price of drugs is comparatively little.

### Section the Seventy-Fourth.

SOCIETY is necessary to counterbalance that selfish taciturnity, that interdictory moroseness, the growth of retirement, the speculative succedaneum of pretended matchless skill. In order to acquire a pleasing address, polite manners, and respectful behaviour, the company of superiors



is to be cultivated, from whom engaging affability is to be caught ; for by such association much improvement may be derived in discussing literary and useful topics, at the time a practitioner may be imperceptibly ingratiating himself as a professional character.

It is to be regretted, that the useful instruction capable of being derived from medical compeers is often interrupted by clashing interests, hence discretion in forming intimacy may be advisable for incautious younger practitioners ; this defect may be in part supplied by the advancement he may have made in epistolary attainments, and the acquaintance formed during subsequent studies, affording opportunities of a medical correspondence. In forming friendships, that kind, which doubles pleasures, and divides anxious solicitude, is said to be entitled to the highest estimation. A familiarity with employers often increases their expectations, beyond all due bounds, and subjects a young practitioner to disappointment, or advisable forbearance : by a cautious yielding, or avoidance of inquiry, a temperate resistance, or a resolute management, differences of opinion may generally be accommodated, even beyond expectation.

Integrity is a characteristic, that has been above

all others urged, as a necessary qualification for every practitioner, and it cannot be expected, from those professors of the art, that are devoid of religious principles, or use religion as a cloak. Our profession has not escaped without censure, on the score of irreligion ; yet it is to be hoped, that the *Biographia medica* will not manifest a disregard of our benevolent Creator ; and if we look into the lives of professors of science in general, we shall not find them unmindful of their duty.

In the account of the great mathematician Mr. Maclaurin, his life was said to have been spent in propagating truth, and virtue, and that he was no less strenuous in the defence of revealed religion ; and the late Dr. Johnson might be instanced as a further example of a sincere respect, and regard for religion.

When the fountain of professional knowledge is unfeignedly impregnated with virtuous principles, it will spontaneously diffuse salutary aid, both in practice, and the guidance of inexperienced pupils ; and it will no less redound to the credit, advancement, and dignity of the profession. Led by the hand of such an admonishing science, the obligations imposed on every rational agent, to conform his conduct to the com-



mands of a superior Being, must be too striking to need insisting on.

Invalids that respect religious duties themselves, would doubt the integrity of, or have some compunction in admitting a medical attendant, that did not think religious tenets worth his notice, or act on principle ; while others, however sceptical themselves, would scarcely prefer a practitioner, because he never frequented a place of devotion.

A total neglect of public worship defrauds our Maker of that small portion of time, which he has appropriated to his service, precludes serious reflection, and may make us forget to whom we are indebted for all our enjoyments. However the multiplicity of engagements of elder practitioners may afford them excuses, for absenting themselves from public worship, a young Apothecary can seldom gain credit for a similar apology, and not many would venture to place such neglect either to shame or fashion.

There are few parents, that fail to lead their offspring to some place of devotion, and steadiness in religion is more frequently accompanied with sincerity, than changes, which are often influenced by secular views.

The unbounded trust reposed by invalids in

their medical attendants, and the motives by which it may be best preserved inviolate, ought still farther to excite a due sense of religious duties. Patients have a right to expect a grave deportment, and an upright confidence; nor is a requisite cheerfulness by any means incompatible with the former characteristics.

The humane attention, and sedulous care of a young Apothecary should be indiscriminately extended to all ranks of invalids; while interest may, in one instance, prompt exertions, it may be also concerned in the credit obtained, by displaying abilities in the cure of inferior patients.

In the delivery of opinions, every invalid is entitled to candour, and civility; the skill of a practitioner may be shewn by an able prognostication, the clear statement manifested in his predictions, or verified by succeeding events. An imperfect acquaintance with a disorder may lead a young practitioner to apprehend danger, or give false alarms; an incautious opinion, or unfeeling sentence may augment real hazard.

In dangerous cases, whatever caution may be proper respecting invalids, their relations have a claim to judicious, and timely warning, for dissatisfactory silence may fairly be ascribed to the ignorance, self-conceit, or mercenary views of



an ordinary attendant. What avails it to proclaim the approach of fatal symptoms, when they are become irremediable; but to place just blame, on the negligent practitioner, confided in for an opportune, and seasonable notice.

A fullen taciturnity may conceal ignorance, but a judicious and timely prognostic can alone be admitted, as a mark of accompanying observation with experience, and integrity with practice.

### Section the Seventy-Fifth.

CONFIDENCE in practitioners ought to be deemed a necessary qualification for the peace of a family may be therein involved; it is beneath the character of an intelligent Apothecary, to fall into a custom of babbling the occurrences of one house to another, or of jesting on the language, or unguarded definitions of a patient; to divulge any professional secrets, or to become a party in any ignominious concealment, the revealing of which may be, by law, requisite.

A patient cannot communicate his sentiments, or disclose his complaints with freedom, unbosom his thoughts, or state every thing he deems connected with his malady, except he can have full reliance on his medical visiter.

A practitioner, that has licentious companions, indulges himself in using unchaste language, or perfidious affirmations, whose whole demeanour is indecorous, may claim the opinion of a few intimates no less restrained in bad habits, but must not expect the reflecting part of mankind, to have confidence in his attendance, or tuition.

The advice and directions of a practitioner will seldom be observed, except invalids be previously convinced of his judgment, stability and integrity. In the support of professional confidence, the interest of invalids, and their connections are materially concerned.

The reliance of the practitioner on the patient's fair treatment of him may be as essential to success in practice.

The administration of medicines must be farcical, unless the directions be followed; punctiliousness in less essential measures can scarcely be invited, if compliance in main objects be disregarded. Although mistrustful, indiscreet, and disobedient patients sustain the principal injury, yet faithful, and humane practitioners cannot be unconcerned at the disappointment, and humiliating implication; besides the loss of an employer's recommendation may be also involved. If a practitioner can forbear inquiry, or resentment,



when he has just cause of provocation, he will often find it his interest.

Every practitioner, that has had a liberal education, has a claim to be treated with respect by his employers, who do not sufficiently consider their own interest, in taking improper freedoms, or indecent licences, at the same time, that it is no less incumbent on Professors of the art to support its dignity by suitable behaviour, and accomplishments.

A servile attendance may have been required from the illiberality, and disqualifications of some intruders in the Science. There may be times, when condescension may be indicated, and then a knowledge of the world would intimate a cheerful compliance, while a polite apology on the other side would sufficiently distinguish it, from humiliating, or intentional disrespect.

There may be many occasions offer, when a medical visiter may render service, besides the prescription of a medicine; which he may be better enabled to do, by not being altogether unacquainted with the habits of the Family, and by having acquired a respectable confidence.

The mind of a worthy Apothecary has sometimes been unhinged, on finding himself secretly supplanted by another practitioner, to humour the

whim of a fretful invalid, or the officious prevalence of an intermeddling visiter; or by having been required to consult with pretenders to the Art. If invalids would duly reflect on the consequences of withdrawing reliance on the persons best qualified to judge; the inefficacy, or uselessness of any one endeavouring to decide on remedies, the ingredients of which remain a secret; and the degrading situation a well educated, and regular member of the profession must feel, they would be more reasonable in their demands, and consider the future benefit they themselves may reap, by the mutual confidence in each other being uninterrupted, and invariably preserved.

Patients exact from their Apothecary a speedy attendance, a patient ear to all their ailments, a judicious treatment of their disorders, directions as to diet, exercise, or other suitable cautions; they often suit the calls to their own convenience, disregarding the repose of a laborious practitioner.

Extraordinary attendance, and visits after the usual bed-time of a medical practitioner ought to be immediately, and specially requited.

In acute complaints, and particularly in children, when few medicines can be charged in proportion to the requisite attendance, Apothecaries are often extremely ill rewarded for their services,



except their employers be considerate, and liberal. In the moment of distress, and pain, promises of reward are voluntarily made, and the value of diligent attendance fully estimated; but with some in process of time such cordiality abates, and a restoration of health seems to cancel the obligation.

It has been argued, that the generosity of one patient sufficiently compensates for another's penury, but such a plea would countenance illiberality, and preclude munificence from its merited benefits.

Disease seldom fails to agitate the mind, and alter the disposition of an invalid, but if he have preserved the confidence of his usual Apothecary, the more serious and permanent the indisposition, the greater may be the advantage of his friendly consolation.

Even the relations of a patient may reap benefit from calling in the aid of a confidential medical attendant, to advise the making of a will; and when a fatal catastrophe prohibits medical assistance, an Apothecary may be farther useful, if he have previously informed himself of the nature of nuncupative Testaments.——See Blackstone's Commentaries. Index.

### Section the Seventy-Sixth.

AMONG the perplexing parts of an Apothecary's practice, I scarcely know any, that exceed the medical care of servants. By law persons hiring servants are liable to provide them with needful medical help; hence they are commonly excluded from admission into hospitals during such service.

When, by indisposition, wonted services are prevented and a deplorable object is beholden, the Apothecary is desired to administer relief; in some cases his attendance is requited, in others not, though he had equal reason to expect it; and still his refusal to attend in future would be esteemed a want of humanity. Some rule of conduct is much wanted, and might be advantageous to all well meaning masters, and servants, as well as practitioners.

When a master sends for an Apothecary, he should be responsible for the payment, whatever his private agreement with his servant may have been, since the Apothecary cannot be acquainted with it, or the time of a servant's departure: or the master should see that the servant discharges the debt. Some masters pay for the medicines of



all their servants, others of a few, some of none, and others refuse under certain circumstances. When servants will chuse their own medical attendants, or when their disorders originate in their own imprudencies, they cannot reasonably claim their master's aid. The ingratitude and misconduct of servants may often render them undeserving.

Apothecaries cannot refuse to attend the servants of families, when solicited with the knowledge of a master: but if masters would engage for defraying the bill, practitioners might make some abatement, from the consideration of the present defects being removed; care should however be taken to prevent impositions.

### Section the Seventy-Seventh.

THE general estimation of an Apothecary can alone be preserved, by his professional skill being adorned with an unblemished character.

He should have general knowledge of the art, as on his discernment invalids commonly rely, for pointing out the necessary co-operative aid of a Physician, or Surgeon.

In ascertaining the seats and causes of maladies, he will feel the advantage of having anatomical skill; while a knowledge of a history of distem-

pers will assist him, in distinguishing, and treating them, or in difficult cases recommending timely advice; and for such information he may have been indebted to lectures on the practice of medicine.

By attending the practice of an hospital he may have observed, that remedies succeeded better, when applied contiguous to the affected parts; and that out of a variety of medicines, adapted to the cure of the same malady, there were reasons for preferring one to another, under certain circumstances, and here he may be aided by the synopsis.

A blister applied to the head in diseases of the Brain, or to the side for complaints in the Chest; a lozenge for disorders about the Throat; and an ænema for affections of the Viscera, or urinary Passages, have been found more efficacious. Powerful medicines, though discovered to be useful, require greater caution in infants, and aged subjects, and render other means preferable, as may appear by consulting the journal.

Analogy may frequently suggest beneficial remedies by a due reflection on the action of them, and on the state of local distempers. If a fermenting Cataplasm be useful in correcting exter-



nal Putrescency, similar ingredients may be expected to be efficacious in putrid diseases.

By a knowledge of the progress, or habitual advances of diseases, they may sometimes be superseded, or a truce gained; as by inoculation, and by preventing the paroxysm of an ague; thereby moderating a contagious malady, or expediting the cure of an intermittent.

The appeasing of intractable maladies, or such as have been called incurable, may be worthy of more than ordinary regard, in the hope of diminishing the list of irremediable distempers.

Nor is it enough for a practitioner to be qualified to point out salutary remedies, for he should be able to predict events, to foretell the effects of medicine, and to argue on the practice advised.

The improvements, and new sentiments perpetually issuing from the press, and the generous communications of dear-bought experience may animate an emulous practitioner to watch the progress of disorders, that fall under his own care, and to be assiduous in gaining proficiency. The most intelligent follower of the art may be compared to a distant enclosure, seeming to consist of flowers alone, in all their varied beauty, yet on a close, and more nice inspection, weeds are discovered,

and imperfections found to be intermixed, or infallibility unattainable.

The length of this chapter forbids any inquiry into the duty of an Apothecary to his pupil, yet this deficiency may be supplied, by adverting to that of an apprentice, and to the practice of an hospital.

It would be needless to trace the industrious Reaper, through all the rich fields of professional inquiries, we may however observe, that an harvest successfully reaped provides abundant grain for future supplies. To such as have a taste, and zeal for the profession, there will be no need to urge the preference of acquirements in Science, to amusements and diversions, too often substituted by the indolent, and undisciplined.



## CHAPTER the TWENTY-THIRD.

### *On the Practice of an Accoucheur.*

#### Section the Seventy-Eighth.

**I**F the arguments offered, in the chapter on examinations, be worthy of attention on any occasion, they deserve notice as to the qualification of an Accoucheur. If instances were not known, one would scarce suppose, that any man would be so unfeeling, and audacious, as to practise this branch of the art, without a regular training; or that from any compliment, husbands would chuse such a person, to act in this important office. The whole association of professors, and practitioners in this department should, for the sake of humanity, earnestly unite in discountenancing untutored intruders. If guardians of the profession fail to support regularity, incompetent judges cannot be blamed for making improper distinctions. Students, who are at the expence of a regular education, who closely apply in acquiring qualifica-

tions, and fulfil what is required of them, lose the necessary spur to industry, when the unqualified are equally privileged, and can gain equal encouragement.

Regulars cannot consult with ignorant and untrained pretenders to the art, consistently with their duty to medical society, or with integrity to their employers.

It may be argued, that women, devoid of elementary rules, are frequently trusted with the management of this momentous office; but it may be asked, are not men generally preferred, in the expectation of greater safety in the hands of those, that have studied the structure of the parts concerned, and the rules of practice, under eminent teachers? Every conscientious professor of the art must acknowledge that there may be greater hazard from this part of science being left to the management of men than women, except suitable instructions have been imbibed.

What a disappointment must it be to a delicate, and diffident woman, that has with difficulty been prevailed on to consent to the customary preference, should she discover her *Accoucheur* to have no superior qualifications beyond a Midwife.

As far as many years experience have enabled



me to judge, a regular disciplined Accoucheur may find, that some recent information may be derived from every case ; but such proficience cannot be acquired without a proper superstructure, a regular education.

The intricate texture of the Uterus, the changes in it produced by gestation ; the important advantages of comprehending the chain of connexion, observed by nature in the succeeding stages of parturition ; and of foreseeing the subsequent good effects in conducing to the recovery of women might be farther argued, in urging the necessity of Accoucheurs being regularly trained.

A knowledge of medicine may be highly necessary for an Accoucheur, and the analogy between surgery, and midwifery may shew the utility of that science being also learned.

Nor are professional talents alone, a sufficient qualification to introduce a practitioner, to profitable employment, and preference. A pleasing address, sobriety, sedateness, cheerfulness, presence of mind, deliberation, patience, discretion, perseverance, resolution are all requisite to complete the character of an Accoucheur.

Juvenile levity, or a foppish appearance, an hasty, or a morose temper, a negligent demean-

our, or a rash disposition may be forbidding qualities.

When women are necessitated to chuse an Accoucheur, excessive caution, restless anxiety, and dissatisfactory suspicion procrastinate the choice; besides the officious insinuations of other women often add perplexity.

In a state of pregnancy women seem to be providentially, and incomprehensibly shielded, not only from abortion, but also from the same share of disorders, to which, at another time, we might expect them to be liable.

The young Accoucheur may derive the greatest advantages from ascertaining with accuracy the gradations, and aids, of each stage in parturition, to the succeeding steps, and also to future success; from observing the inconvenience, tardiness, or pernicious consequences, of such regular progression being interrupted, or disturbed; and the hints capable of being derived from relief afforded by nature.

A familiar acquaintance with the regular procedure, and cooperation of nature may point out rules of art, by which any necessary manuduction may be regulated.

The connexion between the delivery of an in-



fant, and the expulsion of the placenta may no less attract his attention ; as a natural process, tending to a more secure coarctation of the Uterus. I am inclined to infer, from the success in my own practice, that the best mean of preventing puerperal fever is to be apprized of its cause often existing, in occurrences before, and at the conclusion of parturition, requiring also the care of an Accoucheur in subsequent treatment, as I shall endeavour to explain in a future Section.

A perfect ascertainment of the state of the Uterus, in all menacing cases, cannot be too strenuously urged.

### Section the Seventy-Ninth.

**YOUNG** Practitioners, on account of their want of experience, or not having gained confidence, are expected to give up more of their time in such attendances; and it should be with them an established rule, on such occasions to pass their leisure in reflecting on the present case, or some topic within the department.

An Accoucheur will be required, to know the signs of Gestation, and to remedy the inconvenient symptoms; to judge of the periods of miscarriage, and to be informed of the means of pre-

vention, or the management of irremediable cases, with the most probable ease, and safety; besides the best methods of conducting women, through the various stages of Parturition, to a perfect recovery; the choice of a nurse, and the treatment of children will be deemed no less necessary qualifications.

The distinction of spurious, from real signs of Abortion, or Parturition, may materially conduce to the more speedy relief of a patient, and the credit of an accoucheur; equal judgment may be requisite, in discriminating between propitious and unfavourable symptoms; in prognosticating subsequent changes, and probable events.

The mistakes made by some women as to Gestation may put Accoucheurs on their guard in somewhat dubious cases.

The principal instrument of Nature to rid herself of any annoyance, disturbing the human frame, is local pain; and however irksome, or intolerable its presence, its diminution, or absence may be found, in the practice of midwifery, a serious inconvenience. Although the dilatation, more satisfactorily produced by intermitting pains, be defective; yet, even in abortion, when the pains are trifling, the hæmorrhage relaxes the im-



mature rigidity of the Collum Uteri, and gradually prepares the passage for Birth.

This circumstance may intimate caution in the management of such cases, and warn a practitioner from inadvertent precipitance.

The effect of the same degree of evacuation is so very different a criterion of strength, or security, as to be of itself fallacious; nor is the appearance of accustomed health a safer guidance, the present state of the pulse may be a preferable indication. When the membranes are broken, pain is often invited, and during the consequent pressure upon the ruptured vessels of the Placenta, in cases of its presentation, the bleeding is stopped, and some temporary advantage is at least obtained.

If the subsequent pressure be thus useful, may it not suggest some attempt to check the hæmorrhage; and might not some such method, as was practised by Mr. Broomfield, to dilate the Vesica urinaria, be adapted to that purpose? (Chir: Obser. vol. 2.)

Although the important advantage of pain has been illustrated, yet a distinction between its use, and the benefit to be derived from appeasing it, with a view of rendering it more propitious, may no less call for judicious discernment. The cau-

ses of less effectual pains, may be numerous, and point out, to a quick-sighted Accoucheur, the most obvious means of relief.

A change of posture, a cooler apartment, a variation in diet, an aperient, or anodyne remedy, may be suggested; and each may be more particularly pointed out, by a farther attention to natural causes and effects; for instance, when a woman sleeps in the intervals of pain, its more immediate benefit may demonstrate an imitation in some cases, by the administration of a liberal dose of Opium; and the suiting its efficacy to a particular period, antecedent to a probable change of natural progression, may be of great consequence. Although it may be improper to comply with every request of women, or their attendants, an humane explanation of the safety of delay, and the readiness to give assistance, as soon as circumstances will admit, must be advisable.

It may be observed, if one stage of Parturition be unusually rapid, or unnaturally expedited, a subsequent stage is often retarded, or, that by each progression being gradual, and uninterrupted, succeeding steps are more propitiously conducted.

Parturition is often so severe, as to excite the commiseration of every attendant, and were it not that an Accoucheur had patience, and skill, the



solicitations of short-sighted petitioners might often influence and prompt him to precipitate measures. A quick parturition is often completed within twelve hours; but when that period is exceeded, the termination frequently approaches nearly to twenty-four hours; while, in still more dilatory cases, the conclusion is delayed to near forty-eight hours; but in each term, the event happens commonly earlier, rather than at a later hour. Such a knowledge may afford a practitioner an opportunity of procuring repose for himself and his patient, though it may be proper to conceal from others such rules of judging, lest the design should be defeated.

So long as pains are most efficacious, their intermissions are ordinarily more regular, but when ineffectual and fatiguing, they are usually more irregular. Many women suffer much from being overheated, and more especially, at the hour of delivery.

### Section the Eightieth.

THERE may be great utility in counteracting an hasty procedure, particularly in impatient women, in order that the conclusion of birth may co-operate in assisting the contraction of the Uterus, and consequently the expulsion of the pla-

centa. Until birth be ended a mother is the sole object of every one's attention, but as soon as that event takes place, the joy withdraws that care, and transfers it to the infant, as if all risk was surmounted. An experienced Accoucheur will be aware of the necessity of his permanent care, and vigilance being more indispensable.

The state of the Uterus, and of the remaining contents, may be satisfactorily learned, by a custom of making a gentle pressure on the Abdomen ; and there is no time more proper than between the birth, and putting the ligature on the umbilical cord. The pressure invites coarctation, and if there be twins, that is discovered in due time, and without alarm ; besides the postponing the tying of the chord renders the change from the foetal state, more gradual, and safe.

On the gentle, and successful expurgation of the after-birth, the expedient coalescence of the Uterus depends ; to failure in this essential stage, a lodgement of impure discharges, or of the deciduous membrane ; or to a defect of the impulsive agency, hæmorrhage, or puerperal fever may frequently be imputed, or otherwise be unavoidably produced by secondary causes.

In many instances parturition may be easily passed through, and the subsequent treatment re-



quire no great skill, yet care, and caution may in all cases be useful; and when the aggregate of the preceding reflections is taken into the scale, the practice of Midwifery will appear to be a science demanding professional learning, and nice distinctions, great skill, and sound integrity.

### Section the Eighty-First.

THERE is not, in the practice of an Accoucheur, a case of greater consequence, or more perplexity, than abortion in the latter months of pregnancy. When the cause can be attributed to a casualty, some relief may be expected from inward remedies, and quietude; but when the cause is an unusual attachment of the placenta to the Collum Uteri, it may be of moment to ascertain it, when the hæmorrhage becomes alarming. The absence of pain, in the opinion of women, precludes the necessity of a suitable inquiry; and yet it would often relieve the anxiety of such a patient, to be informed, that the premature attack was merely casual, and not brought on by any avoidable incident. In miscarriage at an earlier period, manual aid is seldom required, and there is little comparative hazard.

It is essential to consider the stage, in which the difficulty and management, in cases of abortion,

occur, with a view of calling in the aid of nature, in the succeeding part of delivery, as often as circumstances will admit.

So long as the hæmorrhage continues violent, the difficulty exists, but as that is often restrained, by the secundines being broken, and the waters evacuated, parturition may be assisted by natural pains, except the debility of the woman should demand further, or more immediate help.

In a former section, there are several general hints, intimately connected with this subject.

When women have once miscarried, they seem to be more liable to the same unfortunate propensity, which may remind Accoucheurs to contrive the most probable means of prevention.

In general the Uterus appears to be furnished, if I may so express myself, with retentive powers, with an inherent reluctance to untimely expulsion.

The most stimulating emmenagogues, cathartics, and diuretics, violent electrical shocks have failed to produce miscarriage, or hurt the fœtus; nay poisonous medicines purposely administered have failed to procure abortion, though fatal to the mother, and consequently disappointing the nefarious intentions of sordid prescribers.

Uterine hæmorrhage succeeding delivery is one



of those sudden, and alarming changes, so repugnant to the hope of an anxious Accoucheur, as to render it a proper subject of preconsideration. The shrinking power of the Uterus materially varies; and a defect in coarctation may sufficiently warn a practitioner, not hastily to leave his patient, lest he should be for some time unapprized of an internal evacuation. When the contractile power is weakened, and the vessels patent, the discharge may be evident, or the distention of the region of the Uterus may tend to impede the necessary contraction.

Fainting, or a sense of cold may afford some natural relief, but a distinction, between temporary advantage, and the powers of life exhausting, is necessary, since in such cases patients are commonly unwilling to be disturbed, and have a similar disposition to slumber, as persons that are menaced by extreme cold. Gentle pressure, and applications of vinegar, solutions of crude sal ammoniac, and ice, have been advantageously employed; but practitioners have many prejudices to contend with, and a difficulty in persuading others to believe, that the danger of catching cold is not equal, to that from the hæmorrhage. Such situations, however fortunate in their termination, seldom afford much credit, or praise, though they

be not exceeded in perplexity or requisition of skill.

### Section the Eighty-Second.

AS in Surgery, so in Midwifery, I conceive that great benefit may arise, from the treatment after Parturition being studied apart, and distinctly, rather than combined with the operation itself; although their connection is not to be overlooked.

The debility, that sometimes succeeds Parturition, may demand the utmost regard of a medical attendant. Much mischief may ensue from a weak patient being speedily removed, and for this reason, it may be useful to take all possible means for preventing a necessity of immediate removal, by prior care, and caution, before the conclusion of the birth. A strict caution, as to visitors, may be a necessary injunction.

A permanent recumbent posture is ill calculated to assist the discharge of excrementitious contents from the Uterus, so conducive to the prevention of future indisposition; or to expedite a restoration of pristine strength. If the elevation of the body be gradual, it may in a few hours be supported, and then a requisite change of linen, or alterations in the bed may be safely sustained.



The sparing use of animal food, or fermented liquors, for some days, may greatly aid the recovery, and render the pernicious practice, of having the breasts drawn by Adults, wholly unnecessary.

The recommendation of a gradual return to a more generous diet, and the avoidance of confinement to bed, may also deserve a practitioner's attention; but in every direction, that is given, prudence must be observed.

Every tender mother will anxiously watch the inquiries of an Accoucheur, and expect him to pay attention to the Infant's slightest complaints. The tightness of its dress or the goading of a pin may, in some instances, create alarm, while slight ailments unrelieved may soon destroy such feeble Plants.

It is by an unwearied and permanent vigilance, that Accoucheurs are to expect success, and gain experience; and by such acquirements, accompanied with unimpeachable morals, the esteem of a whole Family will generally be procured; for there is no branch in the profession equally calculated to bring a practitioner into general estimation. An anxious and interested father must feel himself indebted to that Professor of the art, by whose

skill and diligence, both the mother and child enjoy satisfactory health and spirits.

Embarrassing cases will happen to all ranks of Accoucheurs, the abilities of inexperienced Practitioners will often be called in question; and the most skilful be blamed, if they neglect to advise opportune consultation. In all uncommon appearances, the importance of the charge should supersede every interested motive, and the good of the Patient direct the steps to be taken. Convulsion, apoplexy, mental derangement, embryotomy, uterine hæmorrhage, rupture of the uterus, puerperal fever, besides unnatural presentations of the fœtus, and complaints unconnected with this province, may be so perplexing, as to render additional assistance indicated; but to inquire into these several diseases would exceed the bounds of this Essay.

The fatality, that has arisen from puerperal fever, has deservedly exercised the Pens of the most celebrated Accoucheurs in this Kingdom.

Although the melancholy ravages of this malady have often come under my observation; yet I have reason to be thankful for the unexceptionable success, in all those cases, in which I attended throughout the Parturition, and had the management of the after treatment. It may be proper to



add, that I ascribe my wonted success, to an unremitting attention, in preserving, uninterrupted, the succeeding stages of Parturition, with a view of gaining that co-operative assistance, that contributes to a propitious termination; to being cautious, in forbidding a quick removal of my Patient, or suffering her to remain long confined to a recumbent posture, but advising an occasional sitting up to meals, and as the strength would bear it, a more erect position. If during Parturition, any alarming symptoms, or unusual appearances seemed to threaten a disposition to subsequent complaints, I was then more than ordinarily attentive in urging Patients to extraordinary care and caution, in avoiding cold, or other secondary causes of fever.

An introspection of the parts after death manifested exudation, and slight adhesions of the bowels; and from the entire ceasing of pain, for some hours before the fatal event, Mortification must, in some instances, take place; a sign, that should caution both practice and prognosis.

Great improvements have been made in the few implements used by Accoucheurs, and particularly the Lever; a knowledge of them, and the exact manner of employing them must be required: and it may be no less necessary to keep

them methodically arranged, that any one of them may be, on a sudden occasion, readily obtained ; while the concealment of them may demand equal expertness ; nor should the point of any instrument be passed beyond the reach of the Operator's finger, except within the cranium.

Besides the technical terms used by an Accoucheur, he should be familiarized with the cant terms of Midwives and Nurses.

There is no department, in which a practitioner may have greater opportunities of uniting skill with benevolence, and an humane Accoucheur will need no monitor.

A temporary provision, for the relief of lying-in women, and their infants, has been, in several places, a most beneficial Institution ; by a loan of linen, a provision of blankets, or bed ; nutritive diet, medical assistance, and occasional donations. Cleanliness, and the overcoming of all noxious smells, the provision of a nurse, or the superintendence of every thing necessary, have redounded highly to the credit of many humane Patroneſſes in the Country, and it may frequently be in the power of an Accoucheur on these occasions, to render the most useful assistance.

An Accoucheur might advantageously pass his whole vacant time in studying the various parts



of practice, in this branch of science ; but still greater exertions may be required, when other branches are at the same time prosecuted, and the qualifications necessary, it must be allowed, are by no means limited.

## CHAPTER THE TWENTY-FOURTH.

### *On the Practice of a Surgeon.*

#### Section the Eighty-Third.

THE word Surgeon in its derivative sense, is somewhat inconsistent with the requisite qualifications of a practitioner in this part of science, since they are, by no means, confined to manuduction. Could a well educated operator have full employment, he might no doubt become expert ; but since a general acquaintance with the art can alone characterize a sagacious one, beginners in this province should be cautious, of being captivated by the specious shew of dexterity in handling an instrument. So far from operations being deemed a standard of surgical fame,

they ought to be considered the least creditable methods of cure, in most cases ; and with a few exceptions, the last resource, after less harsh measures have been fairly tried without a prospect of relief.

If such performances were the only inlet to a Surgeon's reputation, ordinary, and beneficial means would be omitted, or disregarded, and the information necessary to the eventual success of an operation would be little known. Though an operation be ever so dexterously performed, though it be also cheerfully submitted to, and applauded, yet if it have not been fully indicated, and the general management judiciously conducted, when the mischief comes to be explored by a competitor, a want of skill, or integrity in the operator must be disclosed.

It may be necessary to remark, that the preceding strictures relate chiefly to the use of sharp instruments, to chronic diseases, or capital operations.

I should however wish to call a relief of every malady by the hands of a Surgeon, or by implements, as well as instruments, an operation ; a study of which may be early advised, and of much more universal benefit.



If a person should luxate his jaw, or his shoulder; if his leg, or his arm should be fractured; if another require the introduction of a catheter, or the return of an hernia, such modes of relief are immediate, and necessary, not last resources, and are operations not very rare.

The ascertainment of a malady, and its distinction from any other disease, the best mode of cure, the easiest manner of executing any performance, with the preparatory, and subsequent treatment may be necessary information, for, without such general knowledge, a practitioner must be liable to error.

Unless the parts concerned in capital operations have been previously studied, and the intentions of them fully comprehended, the material parts are often so concealed, as to afford a by-stander an incomplete view of the performance.

Those, who are intended for Surgeons, are, more than medical practitioners, concerned in a minute knowledge of the external, as well as internal constitution of the human fabrick; that they may learn the use of saving skin, and preserving muscular parts, of relaxing resisting muscles, or preventing a loss of their power by an unskilful division of the fibres.

At the commencement of practice, a Surgeon

seldom fails to have much leisure, and as business often arises from casualties, absence from home may be more particularly prejudicial to his interest, hence opportunities of gaining proficiency are not only offered, but urged. Since the practice of beginners is generally guided, by the doctrines imbibed in education, it behoves them to add observation to experience, in order to form a clear judgment of their acquirements. Knowledge depends less on becoming acquainted with what is new, than on a comparative view of past with progressive attainments, from which we may conclude, that the aggregate of our intelligence exceeds the advancements abstractedly considered.

An *humane* Surgeon will only hope to rise in the scale of estimation, in proportion as his abilities will bear the scrutiny of *professional cotemporaries*, and his practice reach the impartial standard of *conscientious conduct*.

An examination of the best surgical, and particularly modern authors may manifest a display of anatomical knowledge, a familiar acquaintance with the history of diseases, and the whole edited management of different maladies.

Writers on the same subject materially differ



in opinion, some excel others in particular parts of their descriptions, according to the varied motives for publishing; and much valuable information on subjects, foreign to the main topic under deliberation, is frequently interspersed in their works.

A young Surgeon will reap considerable instruction from meditating on each part of a subject separately, and collating all the extant intelligence, in each class, from different authors; for such analytical research will better qualify him, to judge of the merits of every publication, that he consults, and prepare him for giving a clearer decision in practice. Besides the usual treatment of disorders, he must not be regardless of the avowed failures, or the unexpected occurrences related.

It can scarcely escape the observation of the studious inquirer, how intimately the branches of medicine, and surgery are connected, and how useful it may be, for a Surgeon to be acquainted with the medical treatment of his patients, although he may often act with a colleague.

By investigating each distinct part of practice separately, a Surgeon is prompted to nicer discriminations, and more scrupulous vigilance.

The more studious, and intelligent a practition-

er becomes, the reader must be to acknowledge the fallibility of the art, and to discover, that the greatest boasters are commonly the most ignorant, the most mischievous, and the most unsuccessful.

The education of a Surgeon is, or ought to be, that of a gentleman, and consequently an invariable support of the honour of his profession must be an indispensable duty, in order that he may have a claim to respectable treatment.

### Section the Eighty-Fourth.

A young practitioner will be wise in selecting those subjects for his prior consideration, that are interwoven with general practice; and the agglutination, or healing of wounds by the first intention, is one that should claim his early regard; but, before he proceed to aim at this sort of proficiency, it may be proper for him to arrange his instruments, a plan of which will appear in a subsequent chapter.

When practice can be supported by facts, and by the rules observed by nature, one would expect the determination to be indisputable, yet speculative opinions often lead to erroneous treatment, and defect in method, to want of success.



The operation for the hare-lip, the inosculation of the edges of large wounds of various kinds, and in different parts of the body, by bringing the lips into close contact, have left no doubt in the minds of many Surgeons of extensive practice, and unexceptionable fidelity, either of the practicability or utility of such a plan.

The forming of a callus, first by a deposit of inflammatory exudation, or a mucilaginous nidus, in which the ossifying vessels afterwards shoot, is perhaps one of the strongest instances of the invisible reparation of a part of the system by nature; and in the healing of recent wounds by preserving the edges in close contact, the agglutinating mass is likewise at first inorganic, and seems to serve a similar purpose; but it should not be overlooked, that the healing, or union of the parts must be, on that account, for some time imperfect, and require permanent support.

When inflammation has proceeded rapidly, as in the chest, the same kind of exudation produces adhesion of the lungs to the pleura; and in many internal mal-formations, similar adherences point out the sanative powers of nature; hence it seems evident, that internal healing proceeds without any injurious abscesses. Is it then requi-

site to leave the edges of a large wound somewhat asunder, lest by a nearer approximation, pus would be apt to lodge, and impede the cure? It has been remarked, that wounds become painful by being exposed to atmospheric air, and are made easy by its exclusion, or by the application of azotic air; and on this principle, while the blisters, raised by persons having been scalded, are unbroken, the pain is trivial, compared with the degree of it, when the wound is denuded; and yet the healing proceeds quicker in the former, than in the latter case. The dread of the application of a blister is much abated, since the preparation has been softer, and has not equally denuded the affected part. What makes the difference between the healing and cure of a simple, and compound fracture, but the exclusion of air in the former, and its admission in the latter?

Mr. Home, in his treatise on ulcerated legs, mentions the advantage of applications, that invite a discharge of coagulable lymph as a preparatory step to healing. In the second decade, the sixth volume, and the two hundred and eighty-second page of the Edinburgh Medical Commentaries, Dr. Thos. Collingwood recommends the decocti-



on of the inner bark of the Elm Tree, in an ointment, for scalds ; subjoining this pertinent observation, " The gelatinous lubricating nature of this ointment must have produced the good effects, from secluding the external air, which is more than half the battle in the cure, in all wounds. "

While I was dressing pupil at St. Bartholomew's hospital, in London, a man was brought into the house, with one half of his scalp nearly separated from the head ; Mr. Pott directed the wound to be carefully cleaned, the loose scalp to be aptly applied, and by a sufficient number of silken sutures, and intermediate slips of adhesive plaisters, to preserve the edges in close contact, observing, that were he sure, suppuration could not be prevented, but pus would be detained, he should still advise the same mode, and open the abscess ; but an uninterrupted, and speedy cure proved the skill of this experienced preceptor.

To my very worthy friend Mr. Allanson, Surgeons are more particularly indebted, for a general introduction of imitating nature, and confiding in her sanative power, even in the largest wounds. I became an early convert to the improvement, and have, with regret, seen in some persons a desire to lessen the credit due to the plan, to vary the rules prescribed, to claim some title

to priority, to suspect inconvenience, and to detract from the just merit of the author.

According to my own experience a recent wound may have its edges brought into close contact, by sutures, and slips of court-plaister, with the ligatures impending from each intermediate opening nearest its attachment ; and if the parts be equally, and permanently supported, a perfect cure may be obtained, in as few weeks, as formerly in months ; and without being interrupted by any lodgement of pus. Besides this opinion has been ratified by the assurances of many Surgeons, at numerous hospitals, which I have visited ; but it may be necessary to add, that in general these operators remarked, that they had *personally* attended to all the regulations being observed, from the admeasurement, and first coaptation of the parts, to the perfect, and firm coalescence ; and had been no less attentive to the prevention of any mischief, than to the position, and restoration of the patient's health, by a timely removal from bed, a suitable change of diet, and a permanent support of the parts.

I have seen some instances, in which, the wound after amputation was in a worse state, than if the improved method had not been attempted,



yet I am sure the procedure, and not the plan ought to have been wholly blamed, and I never saw any failure, that might not be fairly ascribed to an evident deviation from the rules deemed necessary.

I know that want of success has induced many to prefer keeping the lips of a recent wound asunder, in hope to preclude the formation, and detention of pus ; and the consequence of which is, the edges adhere, and so far fix in that state, as to render the cicatrix broader and more liable to future injury, besides a delay in the cure.

Unless the parts be previously measured, a due proportion of muscular parts, as well as integuments be preserved, the wound well cleaned, the ligatures commodiously disposed; the neighbouring parts supported by a new, elastic, and fine flannel bandage ; except the edges meet with ease, and be neatly inosculated by superficial futures, and intervening slips of court-plaster ; the limb placed in a relaxed, and little elevated state ; the bandage timely, and permanently renewed, without a premature stripping off the dressings, the management ought not to be condemned. In other instances, as in the present, the treatment of the wound is not to be the sole care, for success is also involved in observing the state of the

patient. In appeasing symptomatic fever, or removing such extraordinary occurrences, and equally in giving directions as to the confinement, or removal from bed, and a requisite generous sustenance.

It is of the utmost consequence, that the young Surgeon should be impressed with the advantages of healing by the first intention; and in order that he may form an impartial judgment, it may be advisable for him to study each part of the process separately; such as the method of operating; the manner of dressing the wound, immediately after the performance; the continued support of all the neighbouring parts, as well as the union of the edges of the wound; and the whole after treatment; the removal of the patient from bed, as well as the proper position during his confinement; and the avoidance of low diet, when a more liberal allowance may tend to promote healing, or to strengthen the habit.

For the exact regulations necessary to be observed in amputation, I must refer the reader to the index in the eleventh volume of the London medical journal, in which he may find a detail; and it may be remarked, that any Surgeon, who has experienced the benefits of the practice, will need



no rules for applying the method to other operations, or recent wounds; particularly in compound fractures.

To Mr. Baynton we are indebted, for having subjoined the utility of supporting the parts in the vicinity of large ulcers, and endeavouring to draw the edges of them into nearer contact by slips of adhesive plaister; and to the success of the method I can bear testimony, even when left principally to the patient's own management.

### Section the Eighty-Fifth.

IT may not escape the young Surgeon's notice, that this last improvement of adhesive plaister in the treatment of ulcer is founded entirely on the speedy cure of recent wounds; for Mr. Allanson had long ago pointed out the use of applying compresses moistened with cold water, as highly conducive to the healing of obstinate ulcers, and the benefit of bandages both flannel and callicoe has been long experienced.

Since infallibility is not to be expected from any single remedy, a young Surgeon may still have opportunities of exercising his studious observation on the cure of ulcers; and the plan followed by Mr. Home, of considering the differences in the ulcer, and in the habit, of distinguish-

ing useful, from injurious, or inefficacious applications, as well as enumerating such as have been tried, or recommended, would seem to be the likeliest method of ascertaining the varied modes entitled to preference.

Preparations of antimony, arsenic, copper, lead, quicksilver, silver, steel, and zinc; allum, camphor, cantharides, cassida, carrots, cinchona, hemlock, white poppy-heads, and rhubarb; bread, linseed, oatmeal, honey, and yeast: vinegar, ale, stale beer, and water: tincture of myrrh, and of opium; oils of linseed, olive, and turpentine; adhesive plaister, ivy, and walnut leaves, balsam of copaiva, resin, wax, gastric juice, and toads, with an innumerable variety of applications have been recommended for the cure of ulcers; while others have less regarded the remedy, than the well adapted application of a fine flannel, or callicoe bandage, with attention to cleanliness.

Some have preferred warm vapour daily applied, others have advised cold douches, with simple, or medicated waters; some have recommended powerful and stimulating digestives, with exercise, while others have prohibited such applications, and deemed rest absolutely requisite; exposure to air, or the exclusion of it, the appli-



cation of factitious air, have each met with advocates in attempting the cure. I have no doubt, but, under the circumstances related, each practitioner has met with success, and the pharmacopœia chirurgica will furnish a young Surgeon with excellent forms for experiment.

Before any edited advice be censured, all the regulations, and circumstances should be cautiously, carefully, and impartially examined, and facts produced against facts.

One practitioner prefers a dependance on flannel bandage, on account of its elasticity; but if the limb be in an improper state, or the flannel have, by frequent use, and washing, lost its elasticity, the end may be defeated; and great exactness is necessary in the trial of every remedy.

There are few complaints, that distress common people more, than the head of a family having a painful, large ulcer on the leg; or a disease that proves more expensive to hospitals, a young Surgeon may seldom be at a loss to find patients, on whom he may try such means, as may meet his approbation.

The great advantage of uniting observation with practice has been already insisted on, nor can it be too often inculcated; a Surgeon may have frequent opportunities of observing the connexion,

between the removal of inflammation in cases of ulcer, and in patients, that have lately submitted to an operation ; or by comparison borrow useful hints from the latter instance, to aid his experience in the treatment of ulcers.

### Section the Eighty-Sixth.

WHEN a young Surgeon has thoroughly studied the art of healing wounds, and ulcers, he may advantageously turn his attention to qualify himself for discriminating the various kinds of tumours, that may be likely to occur in his practice.

I have heard Mr. Pott acknowledge, that he could not with certainty declare what were the contents of a large tumour in the scrotum, a part one might at first sight think most convenient for a decided opinion.

An error in judgment respecting a malady would generally lead to some mistake in the treatment ; and therefore a correct decision is of the greatest importance.

Ambidexterity, and a *tactus eruditus* may in the determination, as to the contents of a tumour, be materially useful. Quickightedness, and a knowledge of the history of maladies, as well as anatomical skill may greatly assist a prediction.



A Surgeon will be expected to have sufficient foreknowledge to give an opinion, when such a complaint is first shewn to him, and it will be unsatisfactory, if he cannot argue with himself, that the tumour must be such a one, and cannot be of another kind, that he may know would somewhat resemble it.

When the nature of the tumour is ascertained, the advice to be given will be no less essential to the credit of a practitioner ; and if he can add a judicious prognostic, his skill in the science will be more conspicuously displayed.

A tumour may be spontaneously, gradually, or by casualty suddenly produced ; it may be superficial, or deep seated, hard, or soft, distinct, or divided, loose, or fixed, confined, or spreading, mild, or malignant ; its surface may be smooth, or ulcerated, and according to the cause, seat, extent, or contents of a tumour, a determination respecting it, and its treatment may differ.

The opening of a tumour may be needless, or requisite ; may be safe, hazardous, or dangerous ; while its extirpation may be unnecessary, advisable, impracticable, or incapable of affording relief.

A strict inquiry into these differences must be obviously demanded ; in order that a Surgeon's

practice may bear to be unreservedly canvassed ; and the better he is provided with a synopsis on each tumour, or every distinction before hand, the less anxiety he will feel, and the less he will err in decision.

There may be no hurry in predicting, or remedying a tumour that has been gradually formed, and at an age, when such tumours scarcely at any time, or without improper treatment, become malignant. A tumour may have been produced by a blow, and contain blood ; and as this fluid, except air be admitted, is rarely, or ever converted into pus, but the serum first, then the red globules, and lastly the coagulable lymph, are slowly, and imperceptibly absorbed, an opening is generally needless, and means of dispersion preferable.

A whitlow may be so superficial, as that the matter may be safely, without manual aid, discharged ; yet when that disease is deep seated, delay in making an opening may not only increase the patient's suffering, but occasion permanent and irreparable mischief.

When the pus is seated between the periosteum, and the bone, the outward indication of matter affords but little guidance ; the degree of pain, the organ of touch, the inflammation extending



up the finger into the hand, and producing a permanent defect in motion, together with the train of urgent symptoms, call for every mean of relief to be speedily adopted. An entire rest of the whole arm on a pillow, or in a leather, or other broad strong sling aptly fitted; a cathartic, then liberal doses of opium, a timely, and sufficient opening through the periosteum may all require necessary attention. A common method practised by persons is to open a whitlow with a needle, which is often prejudicial. When the right-hand is the seat of a whitlow, or when matter lies under any strong fascia, the early discharge of it may be indispensably necessary to preserve the pristine motion of the parts inflamed.

The aperture of a tumour, that is critical, or the deposit of a violent malady, may be absolutely requisite.

When the contents of a tumour cannot be clearly ascertained, an opening might be hazardous, and when there is reason to suspect the tumour being aneurysmal an opening would no doubt be dangerous, unless preparation have been made for a farther operation, and in that case the patient ought to be apprized of the risk.

The hardness of the tumour, or the distance of

the contents from the skin may prompt means for bringing the abscess into a more advantageous state for an aperture.

In large and deep seated abscesses a small puncture, and a gradual discharge of the contents by repeated operation, and quickly excluding the air, may be pointed out, by the injury produced in such cases, from a large natural, or artificial opening.

The extirpation of tumours may demand equal precaution. A tumour, that has under the same circumstances been observed to disperse of itself, or under a course of mild remedies, can seldom be extirpated without some subsequent inconvenience to the habit, or rendering a relapse more hazardous. Indurated glands, when ulcerated, are too often termed cancerous.

All operations ought to be considered, as similar to powerful medicines, when they are plainly indicated, and really necessary, they seldom fail to be essentially serviceable; but when incautiously, and injudiciously advised, they are commonly pernicious, although the mischief may not be immediate, but at a distant period. A tumour may be removed, by ligature, caustic, or the knife.

When tumours are deep seated, they may frequently be suspected of extending farther internal-



ly, than can be discerned from external appearances ; a chain of indurated lymphatics may often lead to the discovery of a distant gland, and when there is not a fair prospect of eradicating the whole morbid part, little or no benefit can be expected. A fixed state of, or a malignant feel in a tumour may forbid its extirpation, and its having become ulcerated seldom fails to be an important obstacle.

The opportune removal of a schirrous tumour may be more immediately urgent, on account of the age at which it may have commenced, as well as its cause, lest its extirpation should soon be impracticable.

The opening of a tumour may be with different objects in view, that is either a temporary, or a radical cure ; and the methods of attaining the same end may be materially varied, as in the hydrocele.

A hernia may still exemplify a change in the tumours recited ; and it is worthy of mature consideration, to adopt the most beneficial means of reduction, in order to avoid that important operation, sometimes required when the gut is strangulated.

A proper idea of the abdominal ring, and the manner in which the hernial contents descend in-

to the groin, must be indispensably requisite, and that an expert Surgeon may succeed in difficult cases, he ought to be equally acquainted with all the powerful remedies capable of co-operating with his manual dexterity in reduction.

The inefficacy of placing confidence in cathartic medicines seems to be exploded, and opium by way of allaying the irritable state of the stomach to be preferred; but the chief dependence seems to be on producing a sudden relaxation of the whole system by a clyster of infusion of nictianum, and by applying, to the part affected, æther, a solution of sal ammoniac, or such means as may hastily produce a change; and, by the co-efficiency of these active remedies, fit the parts for a successful reduction, so much to be preferred to an operation of such importance.

The necessity of procuring a speedy passage after reduction need hardly be intimated.

### Section the Eighty-Seventh.

A young Surgeon may always find an advantageous employment of his vacant hours in professional searches, by which he will be gaining proficiency, and render himself useful.

It may be questioned if many men have not continued for a long time to suffer great misery



from the unskilful introduction of the catheter ; and although but one instrument be used, yet farther preparation is needful ; by way of inviting reflections on this important subject, it may be proper to term it an operation.

The parts, through which the instruments are passed, being invisable, demonstrate the necessity of the course which it is to take being impressed on the mind of the Surgeon. The changes in the instruments, and the different directions given by practical writers, who have treated separately, or interspersed remarks on this subject, at the time of discussing lithotomy, or other diseases of the urinary passages, may manifest the perplexity of Surgeons regarding the introduction of a catheter. The repetition of the operation being ordinarily required, the tenderness in the parts produced by diseases demanding it, the reluctance of patients to a timely submission, and the advantage of avoiding any permanent mischief may prompt operators to prepare themselves for this important performance. A facility in executing this operation is a step in the qualification of a lithotomist.

Although the apparatus may consist merely of different sorts, or sizes of catheters, and a little simple ointment ; yet the provision of a procinct

may be a little more intricate, as it includes every thing requisite for decency, for warmth to the limbs, for cleanliness, for the reception of the quantity of urine discharged, in the most convenient manner, and for the permanent ease of the patient during the operation. The elastic catheter may be in general preferred, and one of a sufficient thickness is usually chosen.

The cure may be retarded, by delaying a repetition of the operation so long, as to permit a perpetual over-distension of the bladder; or by rashness in forcing on the instrument through the curved passage. If the catheter cannot be easily introduced a consultation of another Surgeon should be invariably advised. When the instrument cannot be rendered effectual, other means of emptying the bladder are to be in due time recommended, or if obstructions remain in the passage, metallic bougies have been lately advised.

This being an operation used as a secondary relief, when a Surgeon has the sole care, no less skill will be demanded in selecting the best extant remedies for assisting in overcoming the primary disorder.

Not only in systems of surgery, but in most writers on maladies affecting these passages, and in many periodical publications useful hints on



the catheter, and on the treatment may be met with, and collected. The necessity of medical assistance must be obviously requisite.

### Section the Eighty-Eighth.

THE following instance of an operation without the requisition of any implement may not be undeserving of notice. The paraphymosis is a disorder met with in young subjects, capable of being relieved by a steady perseverance in endeavours to bring forward the prepuce over the glans, and occasionally detaining it, until, by continued pressure and repeated efforts, the reduction be completely effected ; and this operation is performed, with the fingers frequently anointed with lard, or oil, and having confidence in eventual success.

I have often succeeded, when the ædematous swelling of the prepuce, but for former experience, would have discouraged me from the attempt ; and, I am of opinion, this method may be relied on in most cases, while the disease is recent.

An inquiry into the primary cause of this complaint may frequently suggest the necessity of giving a precaution for avoiding a relapse.

Among the considerations for such maladies, as

require the reduction of a part displaced, the absolute necessity of such a mode of cure, and the accumulated difficulties arising from postponing such a mean of relief must be obvious.

The recited example of cure by reduction is one of the most simple ; that for the hernia often demands medical co-operation ; and the next investigation of reduction may be esteemed no less complicated, or worthy of mature reflection.

### Section, the Eighty-Ninth.

THERE are many substantial reasons, why a young Surgeon should be able to judge, without hesitation, when a bone is dislocated, and the seat of the luxated head of the bone ; or that a suspected dislocation does not exist ; the manner of determining with preciseness, that the injury is not mistaken for any other malady, and is unaccompanied by fracture ; why he should be competent to the most approved methods of treating such diseases ; and finally be equally certain, in determining when the reduction has been unexceptionably successful. A neglect of having ascertained the signs, and a doubt of the qualifications of regular Surgeons may not unfrequently induce per



sons to prefer Bone-setters, who seldom fail, be the case really so, or not, to call it a luxation, or a fracture; and the force they employ is equally satisfactory to the invalid, though far beyond what, in existing dislocation, an experienced Operator would deem requisite or could approve; besides Hospital Surgeons often find that violent inflammation and ulcers in the joints follow their injudicious treatment.

To rescue such an important part of practice from mismanagement, and unskilful practisers, it behoves regular Surgeons to ponder over every thing that is necessary to be known or to be done; to excel pretenders, in convincing employers of a superior degree of information, of a clear comprehension of the disorder, and the means of restoring the limb to its former state.

Having strenuously, and repeatedly enjoined a practice of tracing maladies and operations, in order to gain such knowledge as may enable a practitioner with readiness and firmness to decide on the various disorders, and to execute such performances, as may suddenly demand his skill and expertness, it may be proper to give an example, that may apply as generally as almost any other case, that I can recollect.

The head of the humerus is frequently luxated; a perfect acquaintance with the natural state of the joint, and the muscles that move it, must obviously aid a Surgeon in a quicker determination; when the head of the bone is displaced, and the muscles that must be relaxed in attempting the reduction; a practitioner, who is presupposing this sort of luxation, to prepare himself for a satisfactory management of such a case, will therefore study the anatomical structure of the joint, and the movements performed, in which he may be assisted by suitable engravings, as well as preparations with the ligaments. In reminding himself of this primary qualification, he must bear in mind the distant situation of some muscles from their attachment, or part they move.

The appearances of a limb, or changes produced by this luxation, and the certain signs, which prevent its being mistaken, or which discriminate it from a fracture, or a bruise, require great deliberation.

Next to a clear distinction of the nature of this dislocation, the implements required for its reduction, and the benefit of having them in readiness before they be wanted, should be considered. The posture of the patient, the necessity of his



body being perfectly immovable and passive, during the extension, the exact line in which that ought to be made; the manner of applying the apparatus, the place of the Operator, and of each assistant, the number of coadjutors; the force to be employed, the vigilance requisite, the signs of failure, or success, and the indubitable tokens of the head of the bone having been replaced.

The subsequent treatment must be reflected on, and the inconveniences, that have been experienced to result, duly regarded.

Besides these necessary considerations, there will be many difficult, perplexing, and anomalous circumstances, that have occurred to Practitioners, which will demand strict attention.

When a young Surgeon has analytically investigated all the information in his power to collate from the writings of eminent Professors of the art, some of whom excel in one part, or one point, more than others, he will find it useful to re-examine the detail; and to interrogate himself, that he may be satisfied as to his ability to distinguish the complaint, as to the completion of his apparatus, the manner of applying it, of performing the reduction, and ascertaining it.

The great advantage of such foresight, and prescience, is that it brings those who attain pre-

vious information, upon a level with men that have had longer experience, but less studious inclination.

When a Surgeon is requested by a Patient to decide, whether his shoulder be dislocated or not there ought to be no hesitation; a Practitioner ought not to have to seek for information, but to be prepared to give a satisfactory answer. An Operator, that has the signs and distinctions impressed on his memory, and all his implements prepared, gains confidence, meets the case without dismay, and gives much more speedy relief, nay may cure his Patient, while an improvident Surgeon is making a preparation for attempting the reduction.

One that bears in mind the internal structure, and motion of the joint; the hollowness, or want of prominence, in the deltoid muscle, when the head of the humerus is displaced, the want of any rotatory motion, and when the body is erect the distance of the point of the elbow to the side; the head of the bone being capable of being perceived in the axilla, (if not farther dislodged,) and the evident change in the affected from the opposite shoulder, will feel himself competent to an unerring decision.



The apparatus I have used has been a defensive bandage of bend or stiff leather, lined with wash leather, stuffed and quilted, about five inches long and twelve inches broad, or in circumference; on its outside were two, or three loops, for the purpose of passing through them straps with small buckles to fasten the bandage with firmness. Three additional bandages, two as extensors, and one for counter extension as it is termed, completed the preparatory apparatus; these were made of a fine bed sheet, cut lengthwise into three equal parts. Each of these bandages measured about three yards in length, and twenty-four inches in breadth. A sling of leather, an embrocation, an aperient, and an anodyne medicine, with a bandage to secure the arm to the side, may be deemed requisite.

The application of the implements is of no less importance, but the position of the Patient may be previously settled. In order that the extension of the upper arm may be certain, and efficacious, begin by gentle degrees, and be gradually increased, other parts must be firmly, and immovably fixed; hence the floor will in many cases, be found the best seat for the patient; and also commodious for the Operator, who ought to be in a more elevated station; nor disadvantageous to

those assistants who may place their feet against the hip of the patient, in making the counter-extension.

When the bandages are applied, the fore-arm will be supported in a bended posture; and when the defensive bandage has been closely and firmly secured above the elbow, around the arm, the Operator will make a circular fold in the middle of one of the extensor bandages, placing it over the defensive one, and passing each end of the bandage through the fold on the opposite side of the arm, so that by drawing at each end at the same time, the knot will be satisfactorily tight, and not so liable to slip loose, as in the common mode of fastening extensor bandages. I am obliged to Sir Tho. Cullum, of St. Edmunds Bury for shewing me this mode of securing a bandage, as I have frequently imputed an easy reduction to this improvement. Mr. Wilmer of Coventry I found used some similar method, but I believe it is not in general usage, yet is highly worthy of being adopted. The other extensor bandage is to be put on in a similar manner, but for one to draw from the out, the other from the inside of the arm, to allow room, and at the same time coinciding extension.



The third bandage may be placed in a broader form, under the affected arm over the breast, so high as to fix the scapula, and cause the socket to project, or meet the head of the bone, when by extension it may recoil; the ends being drawn in a line to oppose that of the other bandages last applied.

When every provisional measure appears to be completed, the operator will re-survey every part, and give explicit directions to all his assistants, not only for their concurring progress, but also for their sudden cessation, should it be required. The necessary steps must depend on the judgment of an operator.

By a slow extension at the commencement the Surgeon can judge better of the probable success; whether the assistants co-operate, and the body continue to remain immovable, whether the line of extension promise to be useful, or some change will be requisite.

The noise usually heard, or perceived, by the operator, patient, or assistants; the alteration in the figure of the shoulder, the regained rotatory motion, the elbow point easily approaching the side, and the absence of the head of the bone from the unnatural situation that it had lately occupied,

may convince all parties of the dislocation having been reduced.

Except the Surgeon give suitable directions, the head of the bone may again leave its natural socket ; or the muscles of the arm may waste, unless artificial modes of exercise be contrived to assist a restoration of strength. Without previous reflection a young Surgeon may be defective in one or more of these essential points.

From the length of the preceding recital, it must be confessed, that a practitioner should have professional zeal to promote his inquiries, but the humiliation and discredit of being unqualified to judge of the complaint, or to execute such an operation may equally manifest the impropriety of being unprepared.

Although the dislocation of the head of the femur but rarely happens, yet there is no less necessity for being able to distinguish it from other injuries, and to effect a reduction.

According to the head of the bone being driven backward, or forward, the limb will be longer, or shorter than the sound leg, and the foot will be turned outward, or inward ; on an attempt to cause rotatory motion, or to turn the limb, it cannot be brought straight, but it hastily recoils



into its former situation, creating intolerable pain; instead of the usual prominence formed by the head of the femur, under the glutæi muscles, there is an uncommon cavity; the accident never happens from a slight fall, or gentle force, for either the body must be fixed, and the limb violently moved, or vice versâ.

The difference between this luxation, and a fracture at the neck of the femur may without reflection occasion some little perplexity; though with it be easy to decide.

In this fracture the leg is shorter, when the limb is turned there is no resistance, but it remains in any posture motionless, a grating in the fractured bone may be sometimes perceived, the accident is almost confined to aged persons, and often happens from slight causes. The opposite treatment requisite must render a clear distinction necessary.

### Section the Ninetieth.

A minute attention to the subject of luxations may greatly illustrate the study of treating fractures. When a bone is broken within the capsular ligament, it sometimes wears the appearance of a dislocation, as in the elbow. A fracture may become a principal cause of luxation, as

when the lower end of the fibula is fractured, that end of the tibia may be luxated, which is, and remains, best reduced by bending the limb and retaining it in that posture.

In the reduction of fractures, it is important to pay strict regard to the end of the bone that is stationary, and to that which is movable ; to relaxing the muscles, consulting the ease of the patient, and filling up any hollows between the bones, so as to render pressure more equal. In the investigation of this topic, it must appear that a permanent vigilance, and frequent inspection will be required, hence soap cerate is an admirable application for all simple fractures, with the eighteen tailed bandage, until a circular one be necessary.

The more a compound fracture can bear the same treatment as a simple one, or the more the air can be excluded, and the greater success may be expected ; hence closing of the wound, and applying a moist compress over the adhesive applications have been found beneficial.

Staunton's fracture-box has in such cases an advantage over others, though most of its movements had been already in use, and the price, with the difficulty of obtaining it, in parts distant



from Suffolk, have yet prevented its general use.

### Section the Ninety-First.

THERE can scarcely be any subject more worthy of becoming a proficient in, than the management of different sorts of hæmorrhage.

At such a time every one, except the Surgeon, is too much agitated to judge what is proper, and is apt to do harm instead of good, by what they advise, or apply. The stanching of bleeding in the most advantageous manner is more important, because the case is commonly exigent, and expedition is required.

Natural as well as artificial hæmorrhages are more frequently arterial, hence a knowledge of the course of all principal arteries, and their branches must be necessary; but among the exceptions as to the seat of bleeding vessels, the bite of a leech might be instanced.

In restraining hæmorrhage a principal step must be a complete view, or a perfect comprehension of the vessels, from whence it proceeds; and then the preference due to any select mode of suppressing the evacuation; that is whether by ligature, pressure, styptics, or the actual cautery.

The examination of this urgent case may indirectly lead on to the consideration of the materials

for ligatures, and the manner of applying them, how pressure may best be effected; what deserve to be esteemed valuable styptics; and on what occasions the cautery can be deemed advisable.

Not only applications for checking bleeding, but medicines, and the whole management of such invalids must come under mature consideration.

A bleeding may sometimes be restrained by a continued pressure on the artery at a little distance from the wound, or such a compress may afford a better opportunity of seeing the orifice, and passing a ligature. Pressure will often succeed if the vessel run over a bone, and yet I have known it necessary to persist in pressing with the fingers for thirty hours, before dependence could be had on a permanent stoppage to the hæmorrhage.

When the bleeding comes from some cavity, and the orifices are out of view, canulas wrapped with tow, or lint put on a probe, and these substances besmeared with astringent, or styptic preparations have been efficacious; and Ol. Terebinth. Tinct: Ferr: Muriat. diluted with water, Ruspini's styptic, Heaton's styptic, vinegar, solution of sal: ammoniac, of caustic alkaline spirit, and powders of beech, charcoal, flour, and a variety of similar applications have been tried.



with such pressure, as could be brought into aid. The avoidance of heat, and an observance of cool treatment must be obviously required.

If a large artery by any accident be divided, the necessity of passing a ligature on each end of it must be plainly indicated by the probability of the small branches furnishing a fresh bleeding; yet I have heard of a case, that was near proving fatal, from neglecting this caution; and when each end is distantly secured, the wounded part should be divided.

Ligature is the only sure method of restraining the bleeding from a principal artery, and the largest should be secured by a double ligature. When a bleeding artery lies out of sight within a bone, the application of the actual cautery may become necessary.

## Section the Ninety-Second.

THE management of inflammatory complaints may next occupy the attention.

A decision on the nature and treatment of urgent maladies may be far from all the necessary inquiries, that should engage a Surgeon's studious regard; for he may find no less benefit in reflecting on the most powerful remedies employed by surgical practitioners.

The variety of preparations of hydrargyrus may be occasionally subjected to discussion ; the analogical application of such remedies to diseases somewhat resembling each other ; and the advantage of combining other medicines with these preparations may very properly be deemed heads of inquiry.

As the hydrargyrus muriatus has been observed to have the quickest effect, that preparation may, in many instances, deserve a preference ; but as relapses of disorders, in which a reliance had been placed on that preparation, have occurred, a caution to vary the form, when a check has been given to the disorder, may be no less necessary.

If hydrargyrus have been found useful in the thickened œsophagus, and diseased bladder, we may infer the same effects may be expected, in other contractions of the intestinal canal, or indurations of the viscera. The additional use of such remedies being occasionally changed, with a view of applying them contiguous to the affected parts may merit consideration.

The combination of opium, or of antimony, with hydrargyrus, may deserve due notice, and forms of this kind may be met with, in the pharmacopœia chirurgica.



The caution against suffering by cold requisite to be observed by invalids under a course of hydragryrus should not escape a practitioner's vigilance.

Intractable, menacing, and irremediable disorders should not be left out of the studious investigation of a Surgeon; for his judgment might be called in question, were he not aware of the symptoms portending such sort of maladies; and by mature consideration on the use of appeasing remedies, and analogical reasoning, unexpected relief has been frequently suggested.

As Surgeons become more experienced, a greater number of rare, and perplexing cases, come under their care, requiring extensive professional skill; besides, they are often called in consultation, merely to assist in deciding on the seat of some internal distemper, which must manifest the necessity of their retaining anatomical knowledge.

An inquiry into the nature of latent maladies after the death of invalids is occasionally required of Surgeons, and this operation may therefore employ the thoughts of such practitioners at some convenient opportunity.

The machines necessary for the relief of patients, and various other adjuncts, may be a sup-

plementary inquiry, that may deserve a Surgeon's cognizance.

It must require some experience, before a Surgeon can be supposed qualified, to set in order the topics discussed, in a subsequent chapter, and to judge of their several uses ; yet the prior arrangement of passive implements will be found to be essential, in giving scope to the mind of an operator, to regulate his sentiments, and to be better prepared for executing an arduous performance.

The tuition of pupils might be subjoined, as a farther occupation of the leisure of an intelligent Surgeon, but I shall refer the reader to that part of pupillage, in the chapter on hospital-Surgeon ; reminding practitioners of the necessity of recurring to the several characteristics, not only for their own sakes, but also by way of example.

Although the operations of nature may be regulated by mechanical powers, yet we may suppose human knowledge to be still in its infancy, and that there may be much useful information remaining undiscovered ; there is also reason to believe, that much happiness may result from ignorance, as to the changes in the system liable to happen, and that man is ultimately designed for higher views than those of this life.



## CHAPTER the TWENTY-FIFTH.

*Remarks on Surgical Instruments, or Implements, their arrangement, with a Reference Table; and also forms of Apparatus and Procinct.*

### Section the Ninety-Third.

THE great design of attaining knowledge is to fit us for discharging with fidelity the several duties of our profession; and while it is the part of Philosophy to fix rules, it is that of a wise man to follow them. The invention of rule is like a square to decide between what is strait, and what is crooked. Time is given for deliberate reflection on the manner of proceeding by methodical arrangements, and a previous consideration of the perfections of instruments. An Operator may be expected to have every instrument in good repair, and of the best form, to be acquainted with every improvement, and to comprehend the mode of action.

The numerous instruments in use, the expedition with which some of them may be demanded, the disappointment resulting from any imperfections may point out the necessity of a Surgeon being competent to the employment of them in the most advantageous manner.

If instrument-makers be the projectors of instruments, they ought to have some idea of the parts on which they are used, and the manner of proceeding; or Surgeons should superintend the workmanship as much as if they had invented the implement.

*Simplicity, Lightness, and Facility* may be deemed general perfections in surgical instruments.

Simplicity may not only be desirable in a single implement, but in a whole apparatus. The less an instrument is complicated in its form, and the fewer changes required during its use, the better it is suited to common capacities, and the more perfect it may be esteemed. The curved bistoury recommended by Mr. Pott, for operations in cases of Abscess in Ano, may be in this respect instanced. The cure of the Cataract by deprefion, and of the Hydrocele by injection may be preferred for their simplicity.



The lightness of an instrument may less impede the expertness of an Operator, particularly when great accuracy is requisite, or each hand employed indiscriminately. A couching needle, and a lancet are often made heavier than is necessary, sometimes for the sake of ornament. The length of an instrument may be less under command, and a shorter one may be more commodious, as is exemplified in the late Mr. Squire's improvement of the amputation-saw. Although the amputation-knife may have been made longer than requisite, yet strength being demanded, lightness might here be inconvenient.

The handles of forceps may be an exception to lightness; for here brevity would also be often inconvenient, length of lever and strength, particularly in the cutting bone, forceps being absolutely needful.

Descriptions of instruments by their weight or admeasurement, as well as form, not only wholly, but of distinct parts, might promote greater exactness.

Lightness may not only be of importance in instruments, but in implements, which may be thereby rendered more portable; also in machines, that invalids may have to carry. When the strength required in mechanism precludes lightness, then

it becomes essential to contrive means of removing the weight from the part least able to bear it. The improvements, tending to diminish the weight of artificial limbs, and supporting them by elastic belts over the shoulders, combine these intentions. A Truss made of steel tempered by rolling is much lighter.

The facility, with which an instrument is made to effect its purpose, must be a material object of inquiry. The smoothness, bluntness, or thickness of an instrument, as well as the cutting edge or sharp point being in order, may facilitate the passage or efficacy.

The regular tapering or the parts being accurately fitted to each other, the edge being double, and having a high polish may be termed perfections. Instruments have been passed between the finger and thumb, breathed on, or by water somewhat heated; have been dipped in oil, or smeared with hog's-lard, to aid their cutting, or passage. An instrument being firmly holden materially assists its effecting the purpose, and the posture of a Patient, or an Operator, may be a necessary intimation.

The cleanliness of instruments conduces much to their easy operation, hence great care in removing stains of blood, and making them per-



fectly dry, particularly in all hollow parts or joints becomes necessary. When instruments have been used, stains are best prevented by placing them on tow in cold water, and in a broad wooden bowl, with care as to the edges or points not being injured. When they have been sufficiently immersed, they should be wiped with a soft moistened sponge, then with a dry flannel, or linen cloth, and lastly rubbed with a piece of wash leather until every part be perfectly cleaned.

Should any stains remain, these may sometimes be taken off by putting on the leather a little saffron of steel, emery, or putty, first levigated to an impalpable powder.

As soon as instruments are thoroughly cleaned, they should be minutely examined, and if any repairs be necessary, they should be sent to the instrument-maker, that they may be in complete order when wanted, and it is useful, on this account, to have them in distinct cases.

Facility in implements may depend on previous contrivance, and a pre-consideration of the manner in which they are to be employed. Sets of bandages, that may be suddenly called for, or patterns of such as are seldom used should be in readiness, their due length and breadth should be

circumstantially regulated ; and references to descriptions of inventions may be extremely useful.

### Section the Ninety-Fourth.

EVERY Surgeon ought to be provided with such instruments and implements as may be in exigent cases required ; and be acquainted with the readiest manner of procuring others, by having the catalogues of instrument-makers, and the address of every ingenious mechanic.

The interest and convenience of an Operator, the instruction and utility of pupils ; the speedy relief and expeditious ease of patients, are included in every attention possible being paid to the perfect order and accurate arrangement of implements.

A long, or deep drawer, except there be many divisions, is objectionable, yet it may be proper to keep instruments from the view of inquisitive persons. A closet that is not damp, and will not admit dust, in which each instrument can be placed at a suitable distance and in conspicuous view, seems to be best adapted for the purpose.

Little information can be required, but what may be collected from that Chapter on the arrangement of an Apothecary's shop, and the annexed Tables ; for a reference to the place of



every instrument, or implement, must be highly necessary.

A symmetrical arrangement with a ready mode of recurring to all its contents prompts a Surgeon to greater circumspection, and is a proper preliminary for future regulations.

### Section the Ninety-Fifth.

HOWEVER prolix methodical forms may seem to lucid juvenility, they seldom fail to be followed by studious consideration, and useful researches; they are the only secure guidances, and cautions. The common acceptation of the word Apparatus is somewhat inconclusive, or if understood to involve every thing, for which an Operator can be responsible, would admit of too great extent.

It is not uncommon for the Examiners at Surgeon's Hall, to ask Candidates for a diploma what Apparatus they would provide for an operation under discussion; yet I know of no system, or other surgical work, from which a student could readily prepare an answer. A clearness of terms conduces so much to advances in science, that it ought to be strenuously inculcated; for if Operators remain Sciologists in this introductory stage, their procedures must be subject to harrassing

oversights, distressing omissions, and humiliating interruptions.

An operator is alone answerable for every thing having been provided, and for all necessary directions having been given; not only the want of a principal instrument, but of a bandage, scissars, nay even of a pin, may detract from the vigilance of character, on such important occasions expected. I have therefore ventured to limit the term apparatus, to such preparation as can readily be made, at the house of a Surgeon.

### Section the Ninety-Sixth.

SINCE a form of apparatus, that contained every thing, for which an operator is accountable, would be too copious, I have not only limited that form, but have taken perhaps a bold licence, to introduce a new term, under which the conclusive preparation may be comprehended. The word, that has appeared to me most applicable, and expressive, has been one borrowed from Milton, and though used by him in an hostile sense, yet according to Johnson may admit of a more extensive meaning. Under the word PROCINCT I wish to be understood all the preparation necessary to be made at the house of the patient, or in



the operation-room, the arrangement of the apparatus, and all necessities ready for commencing the performance.

As the procinct may put the patient in a state of suspense its speedy provision is of more moment than the apparatus, it may therefore be advisable to include as many things as can conveniently be prepared in that form rather than under procinct. It has been often allowed, that the suffering from the apprehension of an operation exceeds the painful feelings, hence humanity prompts the use of such means as may expedite preparation and procedure. Would operators in general avow the inconveniences that have been experienced from an incomplete preparation, or consider the reliance had on pupils, or nurses for a procinct, they would not continue to trust to memory, or chance.

It has appeared to me preferable to frame these arrangements, by preparing a common, or general form for each of them, and, by prefixing numbers, to shorten all the particular forms, including a necessary reference to both the apparatus, and procinct. Alphabetical order is most proper for the list of articles contained in an apparatus; but in a procinct, each of the contents should be disposed, in the manner best adapted

for the convenience of an operator, and the guidance of that assistant employed in reaching him the instruments. When a Surgeon has a general arrangement of each, he will find little difficulty in preparing a special one, and particularly, when the former includes as many articles, as can be recollected. The same kind of implements are used in various operations, and although the common list be objected to as exceeding the wants of a Surgeon during any single performance, yet he may find its superfluoufness on many occasions beneficial. The inquiries, and searches necessary for completing such catalogues are allowed to be somewhat tedious, but, as Quintilian observes, the more the task is increased, the greater store of useful knowledge, beyond a methodical arrangement of passive implements will accompany the investigation. The defects met with at the time of operating may often tend to perfect these forms which would be best established, if published under the approbation of the college, or corporation of Surgeons, with a pharmacopæia chirurgica.



*Alphabetical table of a Surgeon's  
Implements.*

	<i>Case</i>	<i>Shelf</i>	<i>Inven. or Recom.</i>
Abcess in ano, cut. inst. for	A	e	Mudge
———Bistoury curved			Pott
———			Savigny
Adhesive plaist. on tape or leat.		c	
Amputating knife		b	{ ind. v. 11 Lon. m. J.
———dble. edge.			
———faw late			Squires
Artery forceps			
Bag or suspensory truss		d	
Bandages, circular callico			
———flannel			
———with comps. for tourn.			
———defensative, for lux.			
———exten. & coun. ex. do.			
———eighteen tailed		d	Pott
———in shape of a T.			
———circul. wires, elastic			
Bistouries, point blunt, or shp.			
curved, and strait, dble.			
edged at the point		e	
Blowpipe	B	b	
Bougies com. metallic		c	
Breast elast. bot. for draw.		d	
Bubonecele curved knife	A	e	
Canulas silv. & elast. gum	B	c	
Cards contain. forms of appa.			
and of procinct		d	

Catheters female and male, gum, silver	B	c	
Catlin	A	b	
Court-plaister		c	
Cupping implements	B	a	
Crotchet	A	a	
Director, long one		e	
Drawings of implements	B	d	
Electrical apparatus	D		Nairne
Forceps, artery	A	b	
——bone cutting			
——midwifery		a	
——for extracting teeth			
Fracture-box	B		{ Staunton Suffolk
Goldbeater's skin	A	c	
Hare-lip pins with hol. wires			
Hook-forceps, dissecting		b	
Inhaler	A	a	Mudge
Injecting, fumigating impts.		e	
——tube for enema			
Inst. maker address of	B	d	
Lancet, abscess	C		
——seton			
——s, common			
——gum			Savigny
Lever, midwifery	A	a	
Ligature for tourniquet		c	
——s			
Lint			
Meas. of card mark. w. inch.	B	d	
——filk			
Mechanics, address of			
Needles curved			



Needles large for dissections	A	c	
———stait for sutures	B	d	
Perforator, Embryotomy	A	a	
Pincushion with pins		c	
Pocket-case of instruments	C	d	
Probangs improved		b	Savigny
Resuscitation appar. for	A	e	Kite
Retractor of leather		b	Gooch
Saw, amputation			Squires
———for dissections	B		
———metacarpal			
Scale or machine for moving gouty persons into bed		a	Sir John Legard
Scalpels in 2 or 3 cases		b	
Scissors, common	C		
———probe			
———tonsil			
Silk for ligatures &c.	A	c	
Splints for fractures	B	a	Pott,
	Sharp, Wathen, Wyatt		
Sound female		c	
———s male			
Sponge, pieces of dry	C	b	
———s several			
Sutures	A	c	
Tape for dissections	B	b	
Tenacula	A		
Tooth-drawing instrument	C	d	Savigny
Tourniquets	A	b	Do. Petit Stick
Tow		a	
Trepanning apparatus	B	c	
Trephine w. irreg. teeth			Squire
Trocar	C	d	Savigny
Trusses elastic			

Trusses suspensory  
Wax for ligatures

A d  
c

*Form of common Apparatus.*

- 1 BANDAGES to suit each operation—with  
bolster for amputations.
- 2 Card, slip of, an inch broad, marked with  
half inches, as a measure during an operat.
- 3 Cerate, soft digestive ointment, if pledgets be  
required.
- 4 Compresses if needful over pledgets.
- 5 Cordial julep, or something to prevent faintness
- 6 Court, or (if necessary) adhesive plaister,  
spread on tape, or leather.
- 7 Crayon or red chalk pencil, for marking  
measured parts,—or ink.
- 8 Cutting forceps, (or bone-pincers) with long  
handles, if such instrument be required.
- 9 Director, sometimes a longer one than that in  
pocket-case may be useful.
- 10 Dress for operator, and sometimes for one  
assistant, or more, may be necessary.
- 11 Forceps, of that peculiar kind a particular  
operation may demand.
- 12 Goldbeater's skin may be useful, if dried  
sponge should be necessarily applied.
- 13 Lancet, if any sort be in a particular case  
required.
- 14 Ligatures of different sizes, and length, not  
too much waxed, but oiled.



- 15 Lint in readiness, though unnecessary between the edges of a wound.
- 16 Measure marked with inches—in an ivory case as used by ladies is commodious.
- 17 Needles crooked, spare, and armed with suitable ligatures.
- 18 ————strait, spare ; and armed with sutures ; with triangular points.
- 19 Oil of olives ; or if hæmorrhage be suspected out of reach, of turpentine.
- 20 Pincushion containing suitable pins.
- 21 Pledgets of tow of suitable size.
- 22 Probe, or whole case of pocket instruments.
- 23 Retractor, of leather, or linen, when required.
- 24 Scalpels, or strait, and crooked knives, as indicated.
- 25 Scissors, curved, tonfil, and strait.
- 26 Silk, and wax, in readiness for any requisite additional ligatures, or sutures.
- 27 Sponge, piece of dried, useful in general bleeding not to be restrained by ligature.
- 28 ———s well freed from stony concretions and untainted by former use.
- 29 Sutures, spare in readiness, or attached to strait needles.
- 30 Tenaculum ; and a spare one may be useful.
- 31 Tourniquets, if the least likely to be required, with compress and bandage.
- 32 Tow for pledgets, compresses, &c.

*Each operator may add, what occurs to his recollection, or may result from varied practice, as a razor may sometimes be wanted, but this is more frequently required a little time before an operation.*

*Apparatus for Bubonecele, or strangulated Hernia.*

APPARATUS common ; number, 3, 5, 6, 7, 9, 10, 14, 15, 17, 18, 19, 20, 21, 22, 24, 28, 30.

Bandage suspensory

Bistoury, blunt point, curved

Card, or parchment

Dissecting-forceps

—————hook

Scissors strait

—————probe

—————tonsil, or wenzel's

Elastic bag for clyster

—————or tube Laundies

Emollient clyster

*The procinct may be easily framed by looking over the general form.*

*Apparatus for amputation.*

AMPUTATION knife

Apparatus, common, the whole

Artery-forceps

Bandage, flannel 6 yards long

—————three yards long, each 2 or 3 inch. broad

Catlin of a large size

—————of a common size

Compress with loops, and stays with buckles

Cutting-bone-forceps

Pledgets of tow thirteen inches long

Retractor, of leather



Saw, short and light

——metacarpal

T bandage to cover private parts, to be specially remembered.

Tenaculum

Tourniquet

### *Form of common Procinct.*

- 1 ASSISTANTS to be procured in sufficient number, and capable of fulfilling directions.
- 2 Basins for containing hot water and sponges, to be provided.
- 3 Bed, to be ordered by operator of a suitable kind, and with additions of folded sheet, folded blanket or flannel, of pillow according to operation.
- 4 Bedchamber, not to be overheated, and the light capable of being excluded, with a free passage at the proper side of the bed.
- 5 Bran, sand, or sawdust, for preserving the floor from being stained.
- 6 Bench or table about a yard high for placing the patient on, and to be covered with blanket, sheet and these well secured. A pillow is to be added, bench to be steady.
- 7 Chairs and if one be required for the patient, cushions for the operators to be adapted.
- 8 Concealment of instruments from the patient's view, proper.
- 9 Dress, as bedgown, petticoat, stockings, cov-

ering for limbs, for the patient, or for decency.

- 10 Dressings to be, if not already, completed.
- 11 Fire and candles if wanted to be directed.
- 12 Handkerchief for covering the patient's eyes.
- 13 Instruments and implements to be disposed in the order in which they are selected, or an operator will require them to be reached by an assistant, without regard to alphabetical order. (See apparatus.) To be concealed from view till all be ready for commencing operation.
- 14 Kettle of boiling water.
- 15 Linen, a piece may be wanted.
- 16 Parts concerned in an operation may require shaving.
- 17 Pitcher containing hot water in which instruments may be dipped.
- 18 ———— with cold water to add occasionally to the hot in which sponges are.
- 19 Position of patients to be considered and of assistants.
- 20 Sheet to fold round a patient on whom an operation is performed while in a sitting posture; and a pillow may be wanted.
- 21 Soap for washing the hands after the operation.
- 22 Tables for instruments, and for the basins, water, &c. separately.
- 23 Towels, several may be necessary; one to cover the instruments.
- 24 Wooden bowl with cold water in which the instruments after use may be immersed; a little tow may prevent the edges being injured

*The order of disposing the implements may be*



*best exemplified, when this form is applied to any select operation.*

*It is to be understood, that the setting in order of the instruments refers to the apparatus being annexed.*

### *Procinct for Amputation.*

ON a table may be placed

Crayon pencil		
Silk measure in ivory case		
Handkerchief		
Compress and tourniquet		
Amputation knife	Catlins	
Scalpel	Retractor	Saw
Tenaculum	Ligatures	
Needles armed with ditto—	Strait do. with futures	
Court-plaster	Flannel bandage	
T bandage or linen	Retentive ditto	
Tow pledgets		

*These covered with a towel.*

Sponges, water, towels, &c. on another table.

The bench should not be too high on which the patient is placed, it should be steadily fixed, and the blanket and sheet with which it is covered should be well secured. A pillow will be necessary. Decency may require the parts to be covered with a T bandage; a stocking, a bedgown or petticoat; may be a suitable dress for patients.

The operator and assistants should be so dressed as not to be afraid of the stream from an artery.

Bran, sand, or saw-dust to be spread where the floor might be otherwise stained.

## CHAPTER the TWENTY-SIXTH.

*Considerations preparatory to professional Decisions.*

## Section the Ninety-Seventh.

DR Johnson has remarked, "that all intellectual improvement arises from leisure, that knowledge is to be gained only by study, and study to be prosecuted only in retirement."

The punctilious manner of treating on the form of an Apothecary's Shop was with a view to pave the way for other methodical arrangements, and to afford time for the subject under deliberation. Every professor of the art, that seriously reflects on the vast dependence placed in his hands, must see the necessity of fulfilling the important trust with integrity. The entire confidence of invalids on practitioners for a faithful management of their complaints, or a judicious, and timely solicitation of assistance, should stimulate every humane professor to be armed with all the best hints, guidan-



ces, and authorities, and to have in store the best rules for practice.

At the time an opinion is asked, or treatment required, there may be no leisure to study the case; but a sufficient intuition to comprehend the disease, to explain appearances, and judge of remedies must be in a great degree requisite.

However laborious teachers may have been in conveying instruction, yet pupils, who relied solely on their improving lessons, would be found very defective practitioners. Although in the early part of a limited employment the difficulties might not be numerous, yet perplexity would be augmented, as business increased. A classical erudition, and a knowledge of professional elements invite observation, and give a renewed zest for studious pursuits.

There cannot be more useful studies for young practitioners, than preparing to attain that distinguishing touchstone of meritorious fame, an intuitive discrimination of maladies, a perspicuous prognostication of their progress, a successful management of patients, and a satisfactory defence of the means preferred. In order that such acquirements may redound to the credit of a practitioner, the satisfaction of an invalid, and the honour of the profession, it is indispensably

necessary that they should be accompanied with a persuasive manner, and unimpeachable sincerity, and should be without reluctance ready to be submitted to experienced colleagues.

Those who have arrived at any pitch of eminence, have not been unlettered, or indolent in attaining professional rudiments ; have not been inactive observers of their own practice, or uninformed of the opinions of others ; but by a clear knowledge of the structure in health, and the alterations produced by disease, have been competent to sagacious decisions, have been no less cautious of urging improper advice, than omitting advisable means of relief.

Such maladies as require speedy determination, and management, as are most important, or likely to occur, seem to call for the primary examination, and proficiencie of a practitioner. In prosecuting these essential inquiries considerable advantage may accrue from classing the observations collated in such order, as to afford a more distinct, and conspicuous view of each separate part requisite to be intuitively ascertained. Researches of this nature will demonstrate the intimate connexion between the different branches of science, the analogy of several disorders, the instruction to be derived from studying separately the history of



diseases, and each part of the treatment ; the success of palliative remedies, even to the superseding of painful operations, or relief of maladies deemed incurable, the acknowledged mistakes, or failures of eminent men, and the multifarious unexpected occurrences, that may by persevering investigation be met with, can scarcely be imagined. The numberless distempers, that are seldom seen by any individual must render every practitioner, that depends merely on his own observation, or skill liable to frequent erroneous decisions, and to the corrections of those, who add to their own experience, that of other practical writers.

The necessity of being correct in predictions delivered to parents, or to the friends of invalids must appear when we consider that a practitioner should not conceal danger, for failing to impart it may be justly ascribed to want of skill in perceiving it, or to a wish to depend on his own exalted self-opinion, rather than in due time solicit assistance.

From a want of previous reflection, or an anticipated view of diseases, not only practitioners of undoubted general knowledge have been humiliateingly mistaken in their predictions; but degrading prognostics have been inadvertently given

by men in that very department, in which they had been supposed to excel.

When practitioners have had long, and extensive experience, they are apt to think themselves too infallible, and too capable of giving a hasty opinion, hence those who have gained, and not without merit, a great name, have sometimes exposed their judgment by a rash decision; and this is the more to be lamented, because such elevated stations may have greater difficulty in retracting promulgated sentiments. A studious preparatory deliberation, by forming the judgment, furnishes caution, as well as guidance, and best precludes a Practitioner from erroneous determinations.

Some labour, and ingenuity, some taste, and ardour for professional pursuits, must first be invited, before this intuitive skill can be obtained; it is however within the reach of every provident Professor of the art, by such an emulative mean, to distinguish himself from Irregulars, and to vie with Competitors.

### Section the Ninety-Eighth.

IN perusing books, and searching out information, not only systems and works on each subject under discussion must be consulted; but each paper, section, or article in every publication, that



treats on that topic, should be carefully examined, that no useful guidance or admonition may be overlooked. The opposite sentiments, that will occur on the same subject, may require acute penetration; under such circumstances it may be requisite to observe, how far facts are contrasted with facts, whether an author is reciting what he has himself done, or what may have been done by his pupils; whether a Writer be young, and has little experience, or has been long in practice; whether it be the opinion of a private Practitioner, or be stamped with the sanction or testimony of Hospital Colleagues.

In whatever department a Professor of the art may practice, such pre-consideration may prove equally necessary, and useful.

Though an Apothecary may more frequently, than an Accoucheur, or Surgeon, be assisted by a Physician, yet, without discernment, the aid would often be called for, too late to be of any use or credit.

A Surgeon, or an Accoucheur, without intuitive skill and quick-sighted readiness in conducting, and executing his office, must be highly blamable, and how much depends on thoroughly keeping up the chain of connection has been already explained.

A studious inquirer will need little information how to improve himself, or what subjects to prosecute, for he will rather find it difficult to limit his investigation of any topic, which he may have selected.

Since there is hardly any malady more destructive to the human race, than one produced by contagion, the nature and progress of infection may be proper for an early inquiry. It is a subject, on which not only much has been written, but is perhaps as far from being exhausted, as any other.

The Theory, or the manner, in which noxious vapour may be imbibed, or poisonous and venomous miasms be absorbed, may be an important inquiry, towards the illustration of suitable remedies. In the extermination of maladies, the consequence of infection, it must be essential to find out the manner in which it is conveyed, and its limits, its antidotes, and the means of superseding or surmounting its pernicious effects.

New chemistry may have afforded an additional scope for the curious inquirer. While Dr. Haygarth has assured us, that small-pox infection is confined to a few yards, Dr. Lind has discovered that atmospherical air is of itself insufficient, and that fumigation must be employed, to correct



contagion; while ablutions, and superseding sensible disgusting effluvia have been suggested, edulcorating such apartments with nitric vapour has been advised.

The increased malignancy of fever caused by contagion may extend the inquiry, while many different complaints may be included. It is of the greatest importance to Practitioners to be quick in deciding on maladies, and to bring forward all the means that have been discovered. Much of future success may depend on early distinction, and timely caution; on succeeding symptoms having been foreseen, and concomitant remedies united. As has been in another place remarked, when the knowledge is immediately wanted, there is seldom sufficient time for a similar studious research.

An Accoucheur will meet with many disorders no less requiring prior consideration, that he may be fully prepared to treat urgent cases. An uterine hæmorrhage may more particularly claim such attention, while the inquiry may involve much general intelligence. Puerperal Fever may be another proper subject of inquiry, as not only much has been written, but failures liberally acknowledged, in order to excite the study of such as profess the art.

In surgery the field of inquiry is unbounded, and the necessity of foreknowledge most obvious. The exigency of numberless cases need not be insisted on, where hesitation as to the existence of a disorder, and the consequent treatment must either reflect credit or censure. The mal-practices of Pretenders should deter Surgeons, from being unprovided with leading distinctions and secure rules of practice. On this account preparatory intimations were more enlarged on, in the Chapter on the office of a practical Surgeon.

### Section the Ninety-Ninth.

IN the province of Hospital Surgeon, or in consultation, the advantage of being prepared with a judicious and unexceptionable decision must be too evident to require explanation; while ignorance and inability to decide must be lastingly degrading. A Practitioner, that has no fixed opinion, may procrastinate the seasonable use of efficacious means, or may hastily urge a needless operation; and although his want of skill may, in either instance, be beyond the capacity of a Patient to detect, yet such ignorance, or want of integrity will not always escape the notice of a vigilant cotemporary.



The sentiments formed by a Practitioner in retirement have great advantages, while many interruptions and impediments are excluded. He collects various opinions, examines them closely, and with impartiality selects such a synopsis, as may impress his mind with every thing he may approve. A Practitioner, in the habit of collating observations; and reducing them into a narrow compass, will be ready in framing a vade-mecum, on every material subject. Such forms will insensibly lead him to be more inquisitive on any topic, that he may find an associate has also studied. Such diseases as require the most speedy assistance, have a prior claim to a Practitioner's studious attention.

## CHAPTER THE TWENTY-SEVENTH.

### *On the Preparation for Operations.*

#### Section the Hundredth.

IT has been too general a notion, that a reduction of the Sysem by cathartics was alone requisite previous to operation, but in this, as in

other forms, the best method of precluding over-sights is to consider the subject distinctly. The difficulties that must ensue from relying on memory, together with the scattered hints on this topic, which ought to be known by every Operator, should influence him to antecedent inquiries.

By vigilance during a course of preparatory means a Surgeon will be less liable to be mistaken, as to the real existence of the disease, or the absolute necessity of the operation.

The age of the patient, and state of the habit, the stage of the malady, and causes of untoward appearances, the intentions of an operation, and the probable consequences may all very properly be discussed at this important prelude; for although an operation may have been deemed advisable, yet if any favourable signs should occur, an humane Surgeon would esteem it incumbent on him to give milder means the fairest opportunity of curing his patient, whatever may have been his immature opinion.

Young subjects seldom have cancers, and therefore seldom require the extirpation of tumours, that from their situation might, in later life, demand an operation. Children from their weak and irritable state may render it more proper to postpone some operations, as inoculation,



or lithotomy. Since infants are feeble any preparatory means tending to increase imbecillity may be injurious, not only at the time of the operation, or disease, but in their consequence, as may be exemplified in the effects of the natural small-pox, such as scrophulous affections, and other signs of weakness.

A long continued preparation might in some instances annul the main design, when the principal intention is to reduce the habit suddenly, by way of diminishing symptomatic fever, as in inoculation, couching, and many other operations. In lithotomy the bowels having been emptied immediately before the operation is a principal part of the preparation.

The habit may in other cases have been so reduced, or changed, as to render a long continued preparatory course absolutely requisite, to prevent fatal effects from an operation; and in some instances the medicines on such occasions indicated may be calculated to relieve the disease. Lithotomy has seldom if ever succeeded soon after a course of caustic alkalics had been strictly tried, but the bad effects have been removed by a permanent use of such remedies as contained a considerable quantity of fixed air, which has itself been, in the opinion of some, a solvent for

the stone in the bladder ; but opium has frequently had a share of the merit, or in the benefit. The habit, having been much reduced by a lingering disorder, may be a sufficient preparation in one case ; while in another, tonics may be of necessity required, to make an invalid able to sustain an operation, or rather its effects.

One stage of a malady may afford opportunities of persisting in the trial of bland remedies, another may forbid an operation at that period ; one may point out its immediate exigence, while another may no less manifest its inutility, or its being needless.

The cure of a venereal affection may sometimes supersede the necessity of an operation.

Opium, conium maculatum, or uva ursi, preparations of hydrargyrus, or antimony, together with other alteratives, have sometimes produced such propitious alterations in diseases, as to delay, if not preclude an operation, that had been deemed necessary.

External appearances may be more formidable from former treatment, or they may insufficiently point out the extent of malignancy.

The end for which a performance is undertaken may vary the preparatory steps, as for the



temporary, or radical cure of the hydrocele.

By having pre-considered the usual effects of an operation, the preparation may be contrived to prevent inconvenience.

Operations have been prudently postponed during a period peculiar to a sex, or a fit of pain, until the swelling of a limb were decreased, or constant pain removed. An indisposition unconnected with that disease for which the operation is intended, may be a proper plea for delaying an operation.

The violence of a malady may be diminished by a particular medicine, as adults have been found to pass through the small-pox more favourably, when they have been seized with the disorder, at the time of being under a mercurial course, which may act as a caution, or a guidance.

The combination of anodynes with other antidotes, or alteratives, frequently adds considerably to the benefits derived, as in joining opium, to fixed air mixtures, to hydrargyrus, or antimony.

A recumbent posture, or rest has often alone made a fortunate change in the appearances of a case, in which an operation had been rendered somewhat dubious; and in lithotomy has been

by Mr. Bromfield considered an essential preparation.

Diet has, in other instances, been esteemed the only preparative, and has effected a material change. A bandage has also contributed essentially to the amendment of a limb in an improper state for amputation. The genius of a Surgeon may be fully exercised in such preparation.

Numerous as the intimations included in the head of preparation may seem, yet these are comparatively few, for besides them an operator must be attentive to all directions, requisite for the convenience, and security of the patient, and also for all necessaries, that can be wanted by himself, and his assistants, whose dress should be suited to the kind of operation.

During a preparatory course, a surgeon may become acquainted with the disposition of the patient, may often, by degrees, discover many unexpected occurrences, and be led to operate more deliberately.

Invalids are often bent on trying an operation, that has been recommended, and, when their resolution is once fixed, averse from any confidence in other means; nay I have known a per-



son endeavour to conceal symptoms, that the suspected might prohibit an operation.

This may shew, that a judicious discernment on the part of a Surgeon is essentially requisite, and that he must look beyond the fitness for an operation, or the consent of a patient incompetent to judge, of the probable consequences.

When an operator has used every precaution in the selection of a proper subject, and in the previous management, he is animated with a reliance on success, and reward.

## CHAPTER THE TWENTY-EIGHTH.

### *Remarks on the performance of Surgical Operations.*

#### Section the Hundred and First.

**I**F a dexterous execution of an operation be termed the criterion of a Surgeon's fame, its most splendid lustre will be often sullied by oversight, and obscured by a neglect of multifarious indispensable aids. An operator may have a stea-

dy hand, and self-command to go through the most severe performance ; yet, for want of having ascertained, with precision, the nature of the disease, the proper stage of the malady, or the fitness of the habit, or from not having a clear comprehension of the structure of parts unexposed to view, he may meet with various obstacles. It is not only necessary to be thoroughly acquainted with the anatomical conformation, of parts concerned in an operation, but also such as are to be cautiously shunned.

A regular education, a penetrating distinction of diseases, and cases, in each malady ; a proficiency in the management of less intricate disorders, that tend to illustrate operative cases ; and a habit of turning them in the mind, by tracing all the necessary steps, are suitable qualifications for an operator.

One, who is thus apprized of accomplishing his ends by the surest means, whose plans have the concurrent support of experienced practitioners, may hope for his endeavours to be crowned with permanent success, and particularly if his practice be justified by irreproachable integrity, and the other characteristics recited.

The more an operator becomes sensible of the



innumerable requisitions included in his qualifications, the less likely will he be to possess a peculiar fondness for such a harsh method of cure, or to perform an operation, the effect of which will not be permanently useful.

A Surgeon cannot proceed to his own satisfaction, except the motives for having recommended an operation be laudable. There must be a reproachful stigma at the time of execution, if there be a consciousness, that the advice originated in some interested scheme, or opposition to other respectable opinions.

He that has taken most pains in prior regulations, and in retracing all the gradations requisite in executing an operation, may reasonably expect to proceed with the greatest facility, deliberation, expedition, safety, and success.

A single omission may embarrass even an experienced, but much more a juvenile Surgeon, less able to recal a presence of mind, requisite for supplying the deficiency with credit.

The apprehension, to which Invalids arrived at years of discretion, are subjected, has been said to exceed the sufferings from the operation itself, hence it is material to shorten the suspense by prior ease, and caution.

A Surgeon must be conscious of his own abili-

ty to perform an operation, otherwise he will dislike to expose his practice to skilful judges; but when he is satisfied with his acquirements, his acquaintance with the probability of unforeseen incidents will lead him to prefer the ablest assistants.

Colleagues cannot give a suitable opinion as to the propriety of an operation, unless they be opportunely consulted, or be such useful assistants, except the operator have explained his procedure.

Surgeons regularly educated should be cautious of countenancing untrained operators, or giving irregulars any sanction, by their attendance, or assistance, as it generally encourages them to become dangerous adventurers, and disparages the profession.

I have heard of a bold practiser, who would have amputated a leg without applying any tourniquet, and of operations highly disgraceful having been interestedly performed by such pretenders.

Young men are best suited for operators, and particularly when encouraged by discerning assistants, a surgeon can never succeed by commencing operator when advanced in years; for so many expedients, such acuteness, and activity is re-



quired, as are incompatible with advanced age. Although a judicious colleague may be extremely useful, yet he cannot always preclude an erroneous, rash, or ignorant procedure.

### Section the Hundred and Second.

IF an Invalid can afford it, it may be in general advisable to prefer a consultation, rather than rely on the single opinion of any practitioner. The various and opposite opinions of the best surgical writers, and the numerous methods of operating render mature consideration necessary. Many contrivances succeed well under the careful management of an accurate projector, and yet fail in the hands of a less strenuous imitator; but the miscarriage often proceeds from a failure in the exact rules prescribed, or from some deviations supposed to be trivial. Each party may be equally free from intentional misrepresentation, but a circumstantial relation may be wanting.

The more a Surgeon becomes acquainted with the general fate of operations, the more cautious he will be in preferring such a mode.

The manner of operating may demand the most serious consideration; for besides the forms recited by way of preparation, there are many

things necessary to be, at the commencement of such performances, recollected, and practised.

The procinct ought to be set in order, out of the patient's view, or hearing, and every thing to be in perfect readiness, before he be summoned.

The choice of assistants with their respective stations, and suitable vestments, must be regulated.

The dress of the operator with the position requisite, and a review of every thing for which he is accountable ought to be a prior consideration.

An avoidance of every thing wearing a terrific appearance, an observance of neatness, and decency should be consulted; also the light required, the fire necessary, and the convenience of the whole apartment or room. A sky-light, or a glaring light may be prejudicial, as in couching. The bed requisite for a patient after operation should be arranged according to the particular kind, under the direction of the operator.

The dress of the patient, his compliance with any previous requisition, his eyes covered, an admeasurement, and marking of the parts, as a guidance to the operator, are necessary considerations.



The size, height, and covering of the bench, or the providing of suitable chairs for the patient, and operator may be worthy of regard.

A patient should commonly be in a sitting, or recumbent posture, during an operation, but if it should require an erect position for a short time, as in tying a varicose vein; during other parts of it the patient should be changed to an easier station; and when the duration of any performance is considerable, the ease of the patient is the more necessary to be regarded.

The implements being all placed in the usual rotation, the assistant employed must be apprized of the succession, in which they will be wanted, with a view to prevent any alarm, and a duplicate may be sometimes required. While every thing is proceeding properly, silence on the part of every Coadjutor seems to be a necessary caution, but if any mismanagement is menaced, or any impropriety remarked, a gentle hint from any Colleague should be gratefully acknowledged.

Every, or at least one, Assistant should watch the position of the Patient, or firmness of any implement, lest an unfavourable removal should escape the observation of the Operator.

The steady posture of a Patient must be, in most cases, an essential circumstance, and some

one should observe, how he sustains the operation. Before an Operator immediately proceeds to execute such a performance, he should re-consider the disposition of all his implements, and the necessary directions.

It is better to put the handkerchief over the eyes of the Patient, particularly when the attendants are numerous, or strangers present, before the Patient enters; the concerned parts being measured and marked beforehand where necessary, tends to shorten the apprehensive state, so distressing to timid invalids; but this cannot be done in all cases. Though almost every operation requires particular changes, yet some rules may be general, and others, frequently requisite, be particularized.

### Section the Hundred and Third.

AN Operator should be cautious of making his hand unsteady by any exertions, or previously fatiguing himself by lifting the Patient.

In some cases commensuration is not only a guidance to the manuduction, but essential for managing the inosculation of the wound, and effecting a more advantageous cicatrix.

In some instances a skilful Operator can, by his feel, mark out certain lines to aid his proceeding with regard to internal parts. ( N 5 )



The external incision is commonly of consequence, in facilitating the whole execution, and yet it is seldom made, by young Operators, with sufficient boldness, or of the length most useful for prosecuting the remaining part of the performance. There is no part of an operation so easy, or so safe; the integuments may be divided without harm, the parts primarily disunited are undisguised by stain, or may with ease be exhibited to view by cleaning; yet expedition is advisable, because the incision is attended with considerable pain.

The outward incision being in a proper direction may be material to the exposure of other parts, and particularly to suit the division of muscular fibres, otherwise subsequent movement may be unnecessarily impeded.

As the incision proceeds, and is less exposed to view, greater care will be required, in cleaning the wound with sponges moistened with hot water; nor should the proper quantity of integuments, or muscular parts to be preserved, pass unnoticed.

An open external wound may often preclude arteries of consequence being unadvisably cut through or, when unavoidably divided, cause them to be more readily discovered, and secured.

Although dispatch be commendable so long as the gradations are safe, yet when parts which are to be divided, cannot be seen, and there are also in the vicinity parts, that ought to be carefully avoided, slowness in the procedure may be much more prudent, while unfeeling procrastination would still demonstrate hesitation from ignorance.

The perfect security of the bleeding arteries by ligatures may demand particular attention; the use of the tenaculum, the application of the ligature round the artery itself, without including muscular parts, or principal nerves, or a second ligature to a large vessel need scarcely be remarked.

Except the wound be at first well cleaned, some inconvenience may succeed from an increased maturation. It is important to bring the lips of the wound in close contact by sutures, and in the intermediate spaces to apply slips of court, or adhesive plaister, the ligatures being suspended at the openings nearest their attachments.

The neatness of a wound, so aptly united, is a strong recommendation of it, but the speedy healing, and the durable stability given to the cicatrix still farther urge the general practice.

If the measuring, and marking of a wound were unnecessary for an experienced operator, yet



such a procedure is instructive to pupils, and a proper example highly worthy of imitation. The recovery of a patient, or the use of the affected parts may depend much on a well conducted, and judicious manual performance.

### Section the Hundred and Fourth.

IT is in becoming qualified for performing operations, that many of the preceding regulations, directions, and rules of conduct should be reviewed. The medical concordance, or directory may refer to many useful hints, besides those contained in systematical authors, and there are few practical writers, from whom some beneficial monitions may not be collected.

In such general researches an Inquirer may often be invited to form useful conclusions, to regulate his practice in other diseases, besides that under deliberation. If the position chosen for Lithotomy be most advantageous for that operation, why may not the same posture be preferable for the Abscess in ano, or other operations in a similar situation? Remarks on the manner of introducing the Catheter may be of use, in the introduction of a sound, or staff.

The manuscript of anatomical, and surgical lectures may afford many useful observations on

the operative part of surgery, deserving attention in the consideration of each particular performance. Great care is required in selecting the most approved guidances and cautions, hence they should be constantly revised, and all improvements added.

Anatomy is certainly the basis, on which an Operator must act, firmness of mind must principally depend on a thorough knowledge of the parts concerned, and the changes produced by disease. It may lead an Operator to be cautious of avoiding parts enlarged by distemper, and rendered hazardous by new arterial supplies, or to afford a hint as to the necessity of extirpating a nerve discovered in the Flap during amputation.

Besides usual occurrences, many instances of anomalous circumstances will try the abilities of an Operator, and the more he may have familiarized himself with all the information, capable of being selected from various experienced Writers, the less confusion will happen. Regularity and accuracy cannot but impress the attendants with a favourable opinion of an Operator; while irregularity, procrastination, or hesitation, must no less detract from fame. One that is well grounded in general rules will be more sensible of the necessity of ascertaining all the intelligence ne-



cessary in particular cases. Operations that may be suddenly demanded, call for more than ordinary precaution.

It must be allowed that practice in such performances is the chief advantage, but then much must depend on having first ascertained the best methods of procedure, and also on making such observations as may tend to proficiency. The result of practice must not be limited to successful events, but must include the failures, or inconveniences that occurred, in order that their prevention in future may be studied. Besides the general remarks here briefly recited, particular circumstances worthy of being recorded in each distinct operation will demand equal regard.

After the operation for the strangulated Hernia, the necessity of procuring a passage must be an obvious consideration. These cursory intimations are intended to remind the young Operator of the obligation to keep in mind the most important regulations.

## CHAPTER THE TWENTY-NINTH.

*On the treatment required subsequent to  
Operations.*

## Section the Hundred and Fifth.

**A**S far as I can judge, there has not been any part of surgery, that in general, has been more superficially discussed, than the topic under deliberation, yet it is essentially co-operative in completing a cure.

By the imperfect orders of an Operator, or the inattention of a Pupil, by the well-intended officiousness of a relation, or the ignorance of a nurse, by the extacy or imprudence of a Patient, an unexceptionable operation may be irreparably defeated.

If a Surgeon be too confident from the applause commonly bestowed, after treatment will be holden in less estimation, and consequently the management will devolve on less interested, or judicious assistants. If such a momentous part of practice be submitted to the care of the inexperi-



enced, it is the more necessary, that the rules for guiding their procedure should be clear, and incapable of being mistaken. Some just idea on the theory of healing by the first intention should be a primary instruction, and I must here request the Reader to recur to Section 84th. in the Chapter on the practical Surgeon.

To a superficial consideration of this subject may be ascribed the deviations, that have tended to disparage the unexceptionable advantages of a subsequent management of wounds after amputation; for those Surgeons, who have punctually complied with the rules prescribed, from beginning to end, have added their testimony of regular success.

In the Section already cited, the causes of failure are enumerated, and perhaps not any Practitioner has more diligently, or impartially searched into the general practice than the Author, who has visited numerous Hospitals, and made particular inquiries.

A minute examination of after-treatment will shew, that the management required is by no means confined to the cure of the wound, but the support of the neighbouring parts for a continuance, and a strict attention to suitable changes in the position and diet of such Patients.

If the neighbouring parts be permanently supported by bandage any Pus will be occasionally evacuated, but if that support be discontinued such neglect may conduce to the formation of an abscess.

If a Patient be confined to bed, and to low diet, after inflammatory symptoms have subsided, no wonder that such incautious procedure should prove as detrimental, as can be represented when imputed to the fault of a well advised improvement.

In order to select all the information capable of being obtained, a reader must have patience to peruse the daily occurrences met with in books of cases; and to watch any hints he may find interspersed, or miscellaneously introduced, in surgical Treatises.

An Operator should consider himself as no less responsible for the direction of every thing that is necessary between the operation, and the cure, than before-hand; he should therefore be vigilant, and study to be so punctilious in his advice, and caution, that each Person employed in executing his orders cannot fail to observe them, without a wilful non-compliance, or negligence.

The guarding a tender wound from injury by the most easy position, not only of the affected



parts, but of the whole body, a caution as to any deviation; the proper framing of the bed, and clothes, and its situation being adapted for necessary examinations of a wound; a preparation for preserving cleanliness; the due heat of the chamber, the degree of light or air to be admitted; the prohibition of importunate visitors, the avoidance of noise, the procuring of sleep, and necessary evacuations; the regulation of food, the prescribing of suitable medicines, and applications, with a strict observance of the methodical rules insisted on, must pass under an Operator's consideration. May not more regard having been paid to the performance, than to the after-treatment, account for failures, and want of success in closing the edges?

In all important cases the directions should be very frequently superintended by a Principal, or some skilful Coadjutor, rather than trusted to subordinate Attendants and Patients.

In tracing the usual symptoms, that occur after operation, the advantage a Surgeon may have, from being conversant with the management of inflammatory affections, and the healing of wounds and ulcers must be obvious; and indeed there may be many other parts of common practice no less illustrative of the treatment under deliberation.

The success of a performance may almost solely depend on an early step in subsequent management, as the procuring a passage after the operation for the Bubonecele; the exclusion of light after an operation for the cure of Cataracts.

An opportune, however slight an elevation of the body, or change of a primary posture of a limb may afford a satisfactory consolation to a distressed object, and if done early under the direction of a judicious Principal, may be useful, rather than prejudicial.

Are not many invalids longer confined to one position, than is absolutely required, and would not their recovery be hastened by a skilful change? In Summer, such alterations are of much greater consequence than in Winter; but they might be detrimental, if left solely to awkward nurses.\*

The most prevalent symptoms after operation, are of an inflammatory kind, and of course acute fever often accompanies them; whatever means may promise to ward off such complaints, or to

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\* Sir John Legard indulged me with an explanation of a Machine which he had contrived for removing with ease an helpless Invalid, weighing near 20 stone, in and out of bed with the greatest facility. Mr. Dawson, Wheel-Chair-maker in Bath, I am informed, had an order for making a similar Machine.



subdue them must be timely employed; but as many habits would sink under too low diet, or other reducing treatment if long continued, equal caution may be required to make suitable changes in due season.

When parts are said to heal by the first intention, it is not to be concluded, that no maturation takes place, but that the rules prescribed are calculated to give room for, and promote the discharge of any pus, that may be formed. Although it may be improper to move early those dressings next the wound, yet for the sake of cleanliness it may be necessary to change the superficial dressings when stained, or offensive.

Folded linen, moistened with cold water, or some cooling lotion, might be applied over the adhesive plaisters, in case the edges of the wound should be much inflamed.

Slight errors in diet or other treatment at this juncture may prove permanently prejudicial.

The appeasing, or precluding the access of pain may be deemed a material part of the management.

The administration of aperients in due time may point out the necessity of a Surgeon being somewhat acquainted with medicine.

## Section the Hundred and Sixth.

THE painful operation of removing the first dressing and renewing proper applications, the apprehension, and sanguine expectations of invalids, with various circumstances, may call for vigilant attention ; and it may be proper, in important cases, for a Surgeon to be provided with a procinct of all suitable necessities, in order to expedite the operation.

In addition to the requisite implements, and applications, which should all be judiciously adapted, it may be useful to have a receptacle for the dressings, with a little vinegar, and some aromatic decoction, to preclude that nasty stench, so disgusting to patients, and bye-standers. The posture of an invalid, and care to prevent the wound being long exposed to the air, may be necessary considerations. A minute observation on the appearance of a wound may be highly requisite, as there is seldom any thing menacing in the symptoms, or habit, but the wound manifests some inherent mischief, which is evident to acute practitioners ; besides patients are always inquisitive to hear a report of the state of the wound.

The visage of a patient with unfavourable



signs generally portends hazard, and concurs with other intimations, in warning an operator of necessary exertions. In studying to anticipate this part of practice, an inquirer must carefully collect the candid concessions of deluded expectation, or unforeseen occurrences.

In proportion as an operator has previously ascertained common regulations, and instructed himself in judging on probable appearances, he will be quicker in penetrating into more obscure signs, or rare incidents, and be better prepared to guard against unpropitious events.

To invalids at such a juncture there is seldom a more acceptable visiter than their Surgeon, when he can have an opportunity of prolonging his stay; besides there may be many hints, that may occur to studious, and intelligent patients, not unworthy of his notice. There may be things, not absolutely necessary to be persisted in, that may be found obnoxious, or there may be inconveniences capable of being remedied.

A delicate appetite may be indulged with impunity, or other wishes safely gratified, under the sanction of a competent adviser.

A skilful, and discerning Surgeon may receive information, and be reminded to observe many circumstances, that had before escaped his notice.

When an operator shews a solicitude to afford every possible consolation, and satisfaction to his patient throughout the cure, he will seldom fail to meet with due recompence.

Although in general the design of an operation may be completed by one operation, yet there may be instances, in which a subsequent performance may be indicated, advisable, or necessary.

In cases requiring the use of a trephine, or trepan, after danger seems over, and relief has been procured, a relapse may point out the necessity of another operation.

In the double hare-lip a cure is better effected by two separate operations than one. In depressing the cataract, the performance may be advantageously repeated.

The satisfaction that many Surgeons must have, in the speedy cure of wounds after amputation, and the benefit derived from the almost imperceptible cicatrix, when compared with the tedious healing, and tender scar commonly observed within the commencement of their own practice must exceed description.

Besides tracing all the gradations from operations to perfect cure, the fitting of any necessary machine, or defence of a part afterwards, must



be included in the care of an operator, but it must be remarked, there may be some time required for the parts to recover their tone, or the cicatrix to become hard enough to sustain pressure.

A Surgeon may render himself useful in recommending the ablest mechanic, in seeing an exact admeasurement, remarking on any probable changes, trying the mechanism before it be finished, and, when perfected, watching its future fitting.

An operator, conversant with all that is required, in the management of patients after operation, will not only be more successful, but be much better qualified as a teacher.

## CHAPTER THE THIRTIETH.

### *On the Office of an Hospital Surgeon.*

#### Section the Hundred and Seventh.

**A** Practitioner, that has had a literary education, served a regular apprenticeship, been sedulous in subsequent studies, approved by ju-

ditions. Examiners, and already had experience as a Surgeon-Apothecary, may with some confidence propose himself as a candidate. An inquiry into the office may shew, that superior talents may be requisite; for although able Colleagues may be requested to give their assistance, yet a discernment, when such aid becomes necessary, is timely required. Many of the cases are rare, uncommon, and have been previously submitted to the care of other Practitioners, nay sometimes exasperated by rash Empirics; nor are Associates always friendly, desirous of concealing defects, or putting a favourable construction on the best endeavours of an aspiring junior. Such establishments are not to be considered merely as receptacles for the relief of unbefriended Invalids, but as professional seminaries, hence the Surgeons chosen ought to be qualified as Teachers of the art. Medical men are the best judges, as to the professional abilities of candidates, but the Trustees may decide on their suitable disposition and integrity. The mode of election, and the number of Surgeons are generally fixed by rule.

In the 'Pursuits of Literature' the author remarks, "I think that the business of Elections, belonging to Hospitals, should be transacted by a



committee of the Subscribers annually elected." In the 7th. volume of the 2nd. Decade of the Ed. Med. Commentaries are further remarks on such Elections. An absurd notion has among some Governors prevailed, that the number of medical officers should be unlimited, but it has been wisely over-ruled. The same philanthropy, that has hitherto animated the Guardians of these charitable foundations to chuse Surgeons of undoubted learning, real skill, and unexceptionable character, will I hope everlastingly continue; that the office may be constantly filled, to the improvement and credit of the profession. A personal application to every Trustee is the more impracticable to those already engaged in private business, and often better qualified, than such as have little employment or experience; hence the Charity may be interested in the manner of voting being simplified, rather than rendered intricate. It has been advanced by some patrons, that an officer, to whom the appointment would be useful might be chosen, since the Governors would retain the power of displacing him; such a preference would be similar to allowing a man the habit of intoxication, with a plea that he might become sober; without adverting to the probable, and hazardous consequences.

## Section the Hundred and Eighth.

A successful Candidate should be respectful to the Trustees, solicit a favourable reception with his colleagues, act in obedience to the printed rules, and behave with humanity to his Patients: There will be many duties implied, besides those that are prescribed by rule, an ignorance of which may subject an inexperienced associate to inconvenience, or imposition. Were a Surgeon himself the sole conductor of treatment required for his own patients, then oversights might be less likely to happen, but as subordinate assistants must co-operate, a jealous eye, a scrupulous superintendence over them is required. Such deputies expect a beginner to have more forbearance, with less penetration to find out their negligence; a Surgeon must however consider himself as fully accountable for the whole management of patients committed to his care; unless in such cases, as that most prudent rule of consultation otherwise directs.

Times of attendance are in some instances fixed by rule, and in others agreed on, or left to the discretion of a Surgeon. Method and punctuali-



ty cannot be too strenuously urged in principal Officers, if we reflect how many may profit by their regularity, besides themselves. Invalids wait with anxiety for the appointed hour; pupils will attend regularly, or be immethodical, according to the example of their preceptor; and nurses can scarcely be blamed, if they cannot tell when the necessaries they have to provide will be wanted; besides when the Surgeons frequently meet, many patients may receive the united aid, of which they would otherwise be deprived.

There is not a form recommended, or a single characteristic pointed out, that is unworthy of the Hospital Surgeon's notice; nor may it be unnecessary to intimate the necessity of paying the strictest regard to what are deemed the common parts of practice, and, though apt to be neglected by students, are not only immediately instructive, but preparatory to more attractive performances. Many improvements in the treatment of diseases deemed intractable, or requiring operation are yet to be looked for from indefatigable researches and persevering trials of milder modes of cure.

There can scarcely be any professional station, in which talents may be more universally displayed, or humanity more conspicuously extended, than in the opportunities here afforded, of inter-

mixing beneficence with skill, or blending sympathy with relief. Confidence is in general to be expected, since those who apply for help look for superior abilities and combined assistance.

Some distempers are altogether, others in part, prohibited from admission, and since such investigation is left to the medical officers, an implicit compliance becomes incumbent on each of them, in forming their report.

It behoves an Hospital-Surgeon not only to act in concert with, but to consider himself as one of the Trustees of the charity, yet as responsible to them for the due discharge of his duty; and to his colleagues, for conforming to the established regulations, and not intermeddling with them in the execution of their office.

If every Hospital throughout the Kingdom made out its annual report, without any variation as to the articles, exactly in the same form, so that a general yearly statement or comparative view could be taken, many advantages might reasonably be expected; and it is to be wished that some diligent secretary, accustomed to look over numerous reports, would propose the best plan. All such establishments are essentially concerned in the speedy cure of its inmates, that the chan-



ges may furnish demanded vacancies; the alternate succession must depend much on the alacrity of every attendant, while this may be promoted by the impartiality and attention of Governors.

Without care such foundations would soon be converted into Poor-Houses, instead of an asylum for the relief of invalids, since those who recommend will often trespass on the rules prescribed.

Whatever good intentions a Surgeon may have he may be called on to explain his conduct, an adherence to the rules may prove the securest defence.

The prosperity of such institutions consists not only in every Surgeon being qualified, and knowing his duty, but in being encouraged to gain proficiency, and to be emulous in promoting advances. The Charity is not only benefited, by the ardour of those that have been long in office, but by the less experienced becoming duly qualified to take their place, and with equal skill, act the part of such as may resign. When from jealousy, or other cause a junior Surgeon is checked by a senior, the Trustees should be aware of the greater blame being due to one that wilfully oppresses, and no less apprized of the difficulty the other may have in demonstrating his just claims, or gaining an impartial hearing.

A multiplicity of engagements may put it out of the power of a Surgeon to attend constantly as a Trustee, but in the joint offices he may render himself useful. Instruments, or implements may be suddenly wanted, even in the night, when the procuring of them would be greatly inconvenient; or patients may, at a considerable expence, be detained in the house, till such necessary aids be procured; though by the foresight or ingenuity of Surgeons with the consent of Governors, suitable provision might be timely made, and the procuring of implements may be less costly than medicine.

### Section the Hundred and Ninth.

HOWEVER desirous a Surgeon may be of fulfilling his duty, yet much may depend on the co-operation of others. The unblamable and impartial execution of the office of House-apothecary, or House-surgeon may contribute much to the harmony, and satisfaction of Surgeons, and to the benefit of invalids. Such office is frequently accepted with a view to gain improvement as well as reward. Surgeons may be in return useful by adhering to the Hospital Pharmacopæia, and being communicative. Both the



House-apothecary and Secretary, offices sometimes combined, may dispatch business quicker by the Surgeon's being very correct in every entry, throughout their in and out-patient's books.

As the Surgeons and their Pupils only pay daily, or occasional visits, a great part of the care of in-patients is intrusted to the House-surgeon, hence much advantage may be expected from his faithful discharge of his duty. If in such an improving situation an House-apothecary fail to gain proficiency, it must be his own fault; by his assiduity in fulfilling directions, and his eagerness to be informed, his instruction may be greatly accelerated. A strict adherence to the printed rules, a methodical arrangement of the shop, and surgical instruments, of a common Apparatus and Procinct; keeping a journal of his procedure, and if he be Librarian being accurate, may give him time for improvement.

### Section the Hundred and Tenth.

THE general demeanour and instruction of Pupils must call forth the due regard, and exertions of an Hospital-surgeon; for he is answerable to the Trustees respecting their treatment of Patients, as much as his own; and he is required in the expectation of improvement being imparted.

If students be indecent, disrespectful, or wanting in tenderness to invalids, complaints may be made to Governors, and a formal inquiry may produce humiliating reflections.

The more methodically the practice of an Hospital is conducted, the more it will represent that sort of private business a Pupil ought to learn, or at least the unavoidable differences will be readily discriminated by a teacher. Plain directions explanatory of theory, a clear distinction between natural and morbid appearances, a comprehension of the history, and a prediction of the progress of maladies; the cause of unforeseen changes, the necessity of exactness, the disorders liable to be mistaken for each other, and the various remedies proposed with suitable comments on their use or inefficacy, may afford a Surgeon an ample field for profitable remarks to Pupils. When students fail to acquire a taste and ardour for the profession at this practical Academy, there can be little hope entertained of their becoming judicious Practitioners.

I know of no method so instructive to Pupils, as for Surgeons to interrogate them, respecting diseases that they have seen before, and ought to be acquainted with, or to remind them of their



inattention. The expectation of such questions would be a spur to emulation, and diligent attendance.

Hospital Surgeons may render essential service to pupils by directing them to consider the patients, as if they were to be rewarded for dressing their wounds ; and indeed, by observation, they may be recompensed in the instruction derived. The necessity of vigilance must be often inculcated, for negligent habits in any assistants must be highly prejudicial, especially in pupils to whom so much is intrusted. The posture of a patient, of an affected limb, or maimed parts, any ungainly, or incautious alterations, the judicious continuance of the same, or the application of fresh dressings, the preservation of cleanliness ; the regulation of suitable diet, the necessity of remaining at rest, or being removed from bed, the contrivance of some gentle movement of extenuated, or contracted muscles, the choice of an efficacious remedy, and an attention to its effect, in the absence of a principal may require the discernment, and skill of a pupil, sometimes in conjunction with a House-Surgeon. A reflection on the necessary qualifications of a pupil may shew the absurdity of the choice being left to trustees, who would admit any one for the sake of fees ; yet

it may equally point out the impropriety of Hospital-Surgeons suffering illiterate young men to be introduced, and have the same privileges, as those who have been regularly educated. The mischief that may be done by pupils, in the interval between the usual times of a Surgeon's attendance, should be a sufficient warning to select such, as are capable of becoming qualified to execute the important trust, and also invite preceptors to initiate them as speedily, as circumstances will admit. On the faithful report of a pupil, or House-Surgeon, of the state of invalids, while under his immediate care, much may depend. A student may profit by an attention to the arrangement of the shop, passive implements, or other methodical regulations under the management of the Apothecary, whom he may occasionally assist with great advantage to himself.

It has been already advised for pupils to lose no opportunities of attaining skill in those complaints, that must often require their judgment, and management, to look upon cures by mild means, as most creditable; and capital operations as last resources, but when necessary, to be apprized, that the manner of operating is but a small part of the information demanded of an operator.



Consultation is a part of Hospital practice, from which much benefit may be derived by students, in observing the preference of united, to individual skill.

### Section the Hundred & Eleventh.

A weekly visitation of an hospital, by all the Physicians, and Surgeons in a body, abounds with so much professional advantage, and is so productive of economy and regularity, as to render it highly worthy of being universally adopted. When I was a pupil at St. Bartholemew's Hospital the medical officers made such a perambulation through all the Wards every Saturday—The solemnity and dignity, accompanied with cheerfulness, and harmony had a singular power of establishing the credit of the hospital. Any curious, rare, difficult, or tedious case, under the care of any Physician or Surgeon was candidly described, and the means already tried cursorily stated, with a request of the advice of this respectable assemblage. A remark from one colleague or other commonly elucidated the nature of the malady, or by analogy suggested a successful mode of treatment; while medical, co-operating with surgical advice seemed peculiarly ap-

plicable to many mixed cases that weekly occurred.

The trivial obstacles tending to impede the speedy recovery of an invalid, the failures, or mal-practices of subordinate managers, eluding the observance of an individual, seldom escaped the wary penetration of so many quick-sighted associates, besides their comments, or admonitions proved much more effectual.

The unhappy objects often expressed their grateful acknowledgments, and seemed sensible, that they enjoyed all the help in the power of the Charity to provide; nay more than it was possible their opulent neighbours could procure for themselves; even incurable patients retired without a murmur, having heard the combined sentiments of so many able judges, in addition to that practitioner, under whose immediate care they had been; they were thus in many instances earlier discharged, instead of remaining an expence to the house.

Besides these unequalled observations on patients, and their treatment, many defects, misdemeanours, or miscellaneous incidents invited attention, and became subjects of future inquiry, or were referred to the trustees.

Instructive conferences on professional subjects,



or new publications ; learned arguments, analogical reasoning, and varied opinions candidly discussed, never failed to be replete with the most beneficial improvement to pupils ; while a young Surgeon practising under such judicious, and critical inspection could not but see the necessity of becoming a proficient, or a more experienced Surgeon of observing rules, and being cautious of innovation.

When all the wards had received the full benefit of this matchless co-operative assistance, such operations, as had been by a majority in consultation approved, were performed.

### Section the Hundred & Twelfth.

One of the principal advantages of Hospital practice is the experience not only of principal Surgeons, but of all those, who act under their direction ; and although much good, or harm may be done by pupils, or an House-Surgeon ; yet no less mischief may ensue from the ignorance ; or benefit, from the cleverness, and humanity of a nurse.

Except an Hospital-Surgeon be methodical in giving his instructions, and vigilant in watching the behaviour of nurses, and except a House-Surgeon or pupil be perpetually inspecting their ma-

nagement, they will often be negligent, and profit little by experience. A young nurse is often as unqualified as a very old one ; the former is generally giddy, and careless, the latter unequal to the arduous task. Obedience to the directions of all superior officers, a disinterested conduct respecting patients, a watchfulness of any changes, or impositions attempted by visitors, with unremitting attention must be required.

Invalids may plead ignorance, for not having conformed to rules ; or may have gained admission, from a misrepresentation, or concealment of their circumstances ; strangers may bring to patients, liquors, or other articles, that might prove highly detrimental, and it is the duty of a nurse to be on her guard. Not only the trustees, but Surgeons are materially interested in having a good nurse.

### Section the Hundred and Fourteenth.

A Retrospection of the office abstractedly, or concomitantly, may illustrate the propriety of a Surgeon being methodical, and exemplary. An orderly principal makes a regular pupil, and punctuality in these offices prompts exactness in others. An Hospital-Surgeon can never want



useful employment, there is always some difficult, or anomalous case, some inquisitive student, some defects, or calls to stimulate his studious attention, and exertions.

A Surgeon has not only to act his own part, and be responsible for his deputies, but to avoid disputes, and settle differences. While a Surgeon is communicating rules of practice to his pupils, his patients may reap considerable advantage from the additional investigation. An upright practitioner will not be satisfied with treating his patients according to the best of his judgment, but will think it expedient to be qualified to support his opinion with the best authorities. In such a station there are better opportunities of trying appeasing remedies in the hope of superseding operations, than in private practice. It is the general opinion, that there is, in hospitals, a fondness for capital operations, which should rather create a cautious proceeding, particularly as the ultimate success is but little known, otherwise it might appear less favourable.

Hospital practice seems to be more than ordinarily guarded from any rash procedure, by withdrawing the power of operating from a single Surgeon, and requiring him to consult his colleagues. It is also to be supposed, that few if any

private Surgeons can be equally competent to judge of the propriety or necessity of an operation, as those that attend an Hospital.

A provident Operator may be compared to a skilful General, whose forces have been long and regularly disciplined, the possible machinations of the enemy preconsidered, and the means of counteracting them revolved in the mind, so that not, any sudden attack can produce dismay, or overturn preconcented movements; but the advantages at the time of action depend much on the whole plan having been cautiously anticipated, and every step traced.

*"Hoc simile est oculis, quod mente videmus."*

The practical sentiments collated and approved in the closet, are submitted to the cabinet, and the proper procedure regularly fixed. To a young Hospital-surgeon it may be extremely useful to operate by rule, that is to measure, and to mark out the parts, nor can it be prejudicial to the most experienced, or to the patient, and should therefore be practised as a suitable guidance to students.

When practitioners are in the habit of noting down the progress of maladies, it may suggest a similar recommendation to pupils, who may seldom see many of the cases in their private practice



for several years, yet they may afterwards be benefited by a review of them.

The conveniencies of an Hospital give scope for various experiments of novel remedies in incurable cases, and the extensive practice is more likely to intimate the best means of gaining relief and preventing mischief by a dependence on Quacks. Although the tediousness of such distempers may render them unfit to be long continued as inmates, yet they may not be improper for out-patients.

Since there are not only irremediable, but fatal cases, the seat of which may have perplexed a Surgeon, or been attended with circumstances that may render an introspection of the body advisable and useful, the procedure on such occasions should be such, as not to alarm or disgust the invalids in the Hospital, or offend the Trustees. Much benefit may be derived by students from the pertinent description and observation of an intelligent and communicative Operator, particularly on comparing previous symptoms with present appearances on dissection.

As such opportunities rarely occur, but are occasionally requisite in Country practice, the manner of commencing, proceeding, and finishing such performances should be retained by pupils;

who in every part of their instruction, should remember that they are qualifying themselves not only as Practitioners, but Teachers.

## CHAPTER THE THIRTY-FIRST.

### *On Consultation.*

#### Section the Hundred and Fifteenth.

THIS is certainly the highest, and most arduous sphere, in which a practitioner can be called to act, and it demands preceding qualification. Every ordinary attendant is expected to give timely notice when danger is menaced, and subjects himself to just censure, when he fails to discern, or neglects to advise seasonable aid. Notwithstanding the most lucid talents, and unremitting application, the most extensive practice, and unobjectionable conduct, anxieties, disappointments, and dissatisfactions will unavoidably disturb the calmest practitioner.

The inexplicable, and unforeseen changes in



diseases may sufficiently warn professors of the art not to be too confident of success; the more zealously studies are prosecuted, and practice improved by observation, the more sensible will they become of their fallibility, and of the necessity of soliciting further assistance. There are few practitioners, that view any case exactly in the same light, or treat it in all respects alike; hence, when endeavours prove unsuccessful, hope may reasonably be entertained from a cautious selection of an experienced colleague.

A perpetual hurry of business may prevent the necessary attention, that an usual attendant would otherwise give, or which an invalid may absolutely demand. Discontent is often roused by officious visitors, bent on the introduction of some favourite professional man, without regarding the permanent detriment to the patient, from withdrawing a confidence he had long experienced to be merited, and cannot easily regain. The competition between neighbouring practitioners may sometimes lead them to an illiberal supplanting of each other, but happily such measures are generally detected, and seldom fail to be eventually exposed. An humane man, whose practice is of a general nature, will be ready to request having the assistance of one that is known to have made

that peculiar disorder his more immediate study, or from his experience to be better qualified.

A regular practitioner can scarcely ever with propriety object to consultation, except when the extraordinary attendant proposed is not regularly disciplined, but is only a pretender to the art; and here he may not only refuse on his own account, but because it is for want of candid deliberation his patient does not see, that the consultation must be needless mockery.

### Section the Hundred and Sixteenth.

CONSULTATIONS cannot be useful, and satisfactory, without the benefit of invalids be impartially considered, without liberal conduct, and conformity to established regulations. The person on whom the consultation is holden should be treated with as much sympathy as an acquaintance, or relation, and should reap all possible advantage from a disinterested, and unexceptionable communication of the united skill solicited. It too frequently happens, that those who are consulted entertain some jealousy of each other, which in some degree precludes proper behaviour, freedom of sentiment, or real benefit; and the demeanour of patients, or their friends, often contributes to the dissatisfaction.



An extraordinary confulter has ample room for complaint, if he be not called to attend, until the opportunity of being serviceable be passed, for the ordinary attendant is inexcusable if he have neglected timely warning of approaching danger. A practitioner is sometimes very absurdly blamed for pressing a consultation ; overlooking the skill he may have manifested in a mature prognostic, and the benefit afforded his patient by having assistance in due season ; while another that neglects such precaution, often escapes deserved censure.

Disimulation on the part of a colleague with an interested intention is highly disgraceful. A practitioner, whose fame is established, may bestow an encomium on rising merit without any condescension, nor should he forget his own expectation of civil treatment, at the same immature period. Respectful deportment, undisguised communication, and immovable integrity cannot be too strongly inculcated.

A junior in consultation will seldom be insensible to the deference due to superiors, or forget the overmatch of age, and observation ; and if his judgment be demanded, however uncoeval, he should not be restrained from proposing means, that appear to him to promise advantage, or from

disapproving such steps as appear adverse to the patient.

Since perverseness is more probable than infallibility in any individual, if the number of consultants exceed two, invalids will be more secure in abiding by the opinion of a majority. Were seniors to be vested with the sole power, or to remain uncontrolled in consultation, juniors would have no incitement to exert their lucid, and beneficial abilities. It should be the study of every consulter to curb indecorous behaviour, to expose want of candour, or illiberality, and to counteract unjust pretensions, or unmerited fame.

Consultation may be holden for various purposes; the malady may be usually of so violent a nature, as to be deemed dangerous; an ordinary attendant may not wish to be intrusted with the sole care, or he may have reason to think it would be more agreeable to the patient to have further advice; it may be to decide on the nature of a disorder, as to its seat or cause, or to suggest a more successful treatment; at one time to confirm the propriety of confiding in a bland remedy, at another to judge of the necessity of an operation, or the manner of operating most advisable; in one instance to convince an invalid of the in-



efficacy of any operation at such a stage of the distemper, or to recommend some palliative remedy. The name of an extraordinary consulter may afford great satisfaction, although the ordinary attendant might have been no less competent to manage the complaint.

All the parties, that compose the consultation, should be thoroughly acquainted with the past, as well as present state of the case. It is incumbent on one that has had the previous care, unreservedly to communicate as clear a statement of the progress of the disorder, and the means that have been used with the effects, as may be in his power; the prior habits, or the ideocracy of a patient may be necessarily suggested. It may be no less the duty of an extraordinary colleague to be candid in his comments, and communicative in any means he may propose. When the patient has been visited, and the necessary inquiries concluded, the consulters should retire to hold conference in due form, not allowing any other topic to interfere.

A sitting posture may be preferable, and whatever is agreed upon should be immediately prescribed; and when a time can be fixed for revisiting the patient, punctuality should be observed. Whatever directions may have been judged requi-

site, they should be delivered by the ordinary attendant, and ratified by the associates. Except on some urgent occasion the plan fixed on in consultation should not be altered, or when of necessity changed the earliest notice of it should be given to the other colleague. When an ordinary practitioner is competent to the execution of any thing agreed on, an extraordinary professor should decline acting in his stead, rather than endeavour to supplant him. It may not only be proper to do justice to the patient, but also to act honourably, and handsomely to associates, the preservation of harmony may be of permanent advantage to all parties.

Although it may be difficult for a practitioner to recommend a particular colleague without offence to others, yet it may be highly proper for him to state the province from which the experience is chiefly required; otherwise an ordinary attendant may incur blame, by advising a physician, when an accoucheur, or a Surgeon might have been more beneficial to the patient.

When extraordinary assistance has been procured, a primary attendant should not feel himself either solely responsible, or vested with equal



power, but should carefully and faithfully pursue the steps unitedly approved.

There may be differences of sentiment, without any material diversity in the proposed treatment, and yet such dissention, if disclosed, might greatly perplex an invalid, or his friends.

### Section the Hundred & Seventeenth.

IN addition to the general remarks respecting consultation it may be observed, that some difference may arise from the respective situations of those who meet, and of the invalids, whose cases demand united assistance. When a Physician is consulted, the responsibility of prescribing becomes removed from the Apothecary on whom it is incumbent to give all the information he can, and to observe the directions he may receive ; or if he should in the interval be consulted on any unforeseen circumstances, every requisite change should be early communicated. Compliance on the part of an Apothecary should excite affability and liberality on that of the Physician, for by their unanimity a patient may be materially benefited.

If Accoucheurs, or Surgeons meet in consultation they appear to be more co-equal, and join

in responsibility for the future care of the patients, the experience, and promotion of one may give a claim over another in point of respect, and judgment, but such privileges should rather be voluntarily accepted, than urged.

Although one may have been long in practice and have advantageously improved, yet he may sometimes be unacquainted with methods, that may have come to the knowledge of a junior, highly worthy of being adopted.

In hospital practice consultation is an original regulation, by which all the professional officers are to be governed; nor can it be deviated from, without the patient's losing one of the greatest advantages of such charities. This fundamental rule establishes an indulgence almost out of the reach of any wealthy invalid; for in deciding on the most important cases, it prohibits an individual from acting on his own opinion only, and gains for the patient the greatest security in the power of governors to procure the combined experience and discernment of all the medical, and surgical officers. It is to be hoped that all persons concerned will endeavour to preserve this salutary regulation inviolate, not only for the sake of invalids, but in order to keep alive one of the most



animating spurs to professional exertions, and by improving juniors to support the credit of such institutions.

In behalf of students it may be subjoined, that consultations should be conducted for their benefit, and example, and particularly as invalids would not be injured by an adherence to such a rule.

If regular practitioners consult with untrained practisers, such encouragement may prove very prejudicial to well disciplined pupils, or students may equally suffer from observing want of order, or improper deportment in consultants, whose conduct ought to be exemplary.

## CHAPTER THE THIRTY-SECOND.

### *On medical reports at Coroners' inquests.*

#### Section the Hundred & Eighteenth.

**I**N a paper, by the late Dr. Wm. Hunter, in the London medical observations and inquiries,

and in the seventh volume of the second decade of the Edinburgh medical commentaries this topic is somewhat discussed otherwise there is little information to be collected but from foreign writers, or law books. Blackstone's commentaries, Burn's justice, Hawkins's pleas of the crown, Lex coronaria two volumes may be found to treat on this important subject. The Lord chief Justice of the King's Bench is the sovereign Coroner, and in former times the office of Coroner appears to have been confined to men of high rank. Attorneys, and Apothecaries are often chosen Coroners, perhaps from a hope of considerable utility from their professional skill. While men of learning act conscientiously, they may more securely direct a jury, but then care should be taken that their private interest should never clash with their public duty. It does not appear to be absolutely required of a Coroner to summon the attendance of a Surgeon at every inquest, yet it seems to be generally implied, and the custom is in degree established. The law states, "that all wounds shall be viewed, their length, breadth, deepness, and how many wounds there be reported and enrolled in the roll of Coroners."

'In such well directed investigation many nice



points may be involved beyond an outward view, or superficial inspection; for anatomical skill and acute penetration may be demanded. The credit of our profession may be concerned in a perspicuous, accurate, intelligent, and faithful decision.

A juryman must form his judgment principally on the opinion of the professional examiner of the wound, or other injury, suspected to be the cause of death. A comparative view of the duties of an examining Surgeon, and a juryman may convince an inquirer of the necessity of the former being duly qualified, in order to govern the determination of the latter aright, and also to furnish occasional evidence in a court of judicature.

From the objections started to the introspection of morbid bodies few practitioners have opportunities of performing such operations, or becoming conversant with the manner of prosecuting such inquiries.

The necessity of a Surgeon being competent to explain the appearances from having an intimate knowledge of the natural structure and functions, together with the cause of the changes produced, and to argue in support of his opinion must be obvious. His ingenuity may be humanely exercised as an advocate for a prisoner innocently ac-

cused ; or his judicious statement may leave no doubt as to the manner, in which the deceased "came by his death," and may justify the apprehension of a suspected person. Since a Coroner's Jurisdiction seems to extend no further than death by misadventure, when sudden death from well known natural causes not only occurs, but has been predicted by an eminent Physician, an inquest appears to be precluded, nevertheless a reluctance to comply with the demand might involve suspicion. There are many chronic maladies, that prove suddenly mortal, such as the syncope anginosa, vel angens, or more commonly known by Angina Pectoris ; Aneurysm or other similar fatal complaints.

The cause of death may require a practitioner in one peculiar branch, but in all cases the examiner should have skill in anatomy. When a deleterious drug is suspected a medical professor of the art should be chosen. If the deceased have been in a state of gestation, or be a new born foetus or infant, an Accoucheur of experience should be preferred. For the like reason a Surgeon would be more eligible in a mortal blow or wound.

A Surgeon-Apothecary in full employment in all the several departments, if he be also a skilful



Anatomist, on such occasions may be esteemed a suitable inspector.

Magistrates, or those who appoint Coroners, cannot be supposed to be judges as to the qualifications of professional men, it would therefore seem proper, that such as are to give medical reports at Coroners' inquests should be previously examined, and approved, by professors capable of investigating necessary qualifications.

When the forfeiture of a person's life may in a great measure depend on a professional report too much caution cannot surely be exercised in the choice of a prudent, judicious, and honest examiner. The evidence, on which a verdict is to be given, ought to be grounded on as clear an ascertainment of the cause of death, as it is in the power of medical skill to determine, and not merely on conjecture from external appearances, or superficial relation.

In all important cases so much intuitive skill may be requisite, that it may behove an inspector to have reflected on usual occurrences, the best manner of discovering them, and conveying to jurymen the proper deductions to be drawn from such appearances. Those accustomed to dissections are likely to possess additional discernment, to keep in remembrance the difference of posture

at the time of a wound having been inflicted, the region in which a wounded part is situated, and the direction in which an instrument seemed to have passed; to distinguish whether the injury would be a certain cause of death, or a similar wound in surgical operations had been made with a successful cure, the death being wholly to be attributed to the accident, or to want of timely skill having been obtained, and to what cause the neglect appears to be imputable.

Were an inquest to gain no further information from an ingenious professor of the art, than resulted from questions proposed by a Coroner and his jury, on a superficial view of a corpse, the report would not only be defective, but erroneous; yet judges, more acute in their circumstantial inquiries would readily discern past neglect, as has often been evinced in courts of judicature. An outward wound may portend little danger, nay superficially considered may be rather useful, yet the accompanying blow, or the latent effects may on introspection be evidently fatal.

In order that medical reports may not mislead a jury, or be misconstrued by a Coroner, they should, besides answers to interrogatories, be delivered in writing, and faithfully recorded, and



when a subsequent investigation is to come on in a court of justice, the professional examiner should have a copy of the record transmitted to him by the Coroner, that he may be fully prepared to give evidence and also answer any cross questions of ingenious Counsel in their endeavours to exculpate their clients. A written report would stimulate care, caution, and correctness in examiners, if not indirectly lead to more accurate decisions in inquests.

There are many instances in which an inspector cannot faithfully perform his office without having a suitable apparatus, for the preparing of which some little time may be required.

Time is also necessary for a previous consideration of the probable occurrences in each case.

A retrospection of the qualifications necessary for an examiner must point out the propriety of Coroners being particularly circumspect in the selection of professional inspectors.

Men who are best qualified have usually many engagements, and without due notice cannot be readily procured.

It is too frequently the practice of Coroners to summon the Surgeon after all the jury have been fixed on, nay sometimes are assembled, nor is sufficient regard paid to preferring such practitio-

ners as are likely to be well qualified. I have on other occasions complained that those who have been at the charge of a regular education, and been approved by established guardians are often overlooked, and such as are untrained and less competent employed by public officers, from some trivial cause, or interested motive. Some injunction to preclude the unqualified, or irrelevant reports, and some regulation respecting a preference of those persons, on whom greater reliance may be had, are much wanted. When a disqualified practiser is chosen, he naturally pleads the inexpediency of an introspection, which would tend to expose his ignorance.

### Section the Hundred and Nineteenth.

THE first person summoned by the Coroner should be the medical, or surgical inspector, that he may be fully prepared to execute his office with credit and satisfaction. If such investigations were limited to examined and approved practitioners, we might expect many advantageous guidances and admonitions to be published. Mr. Cheselden has observed that it makes a material difference, whether a person dies apparently from the administration of a remedy prescribed by a regular and intelligent practitioner anxious



for giving relief, or by an ignorant and mercenary pretender, devoid of caution, and careless as to the effect. A travelling empiric prescribed a powder for a child supposed to have worms, and although a much less dose than he had directed was given, within a quarter of an hour the child was seized with excruciating pain in her stomach and vomiting, and in a few hours, after she had taken the medicine, expired. A cat, that had licked the contents, died before the child. As I understood, the remaining part of the powder was, at the instance of the quack, thrown into the fire. From the corroded state of the stomach there was no doubt of the immediate cause of the child's decease, and little hesitation as to arsenic having been an ingredient, and though these facts were given in evidence the verdict acquitted the empiric, who was invited to sup with the Coroner and Jury.

I have been several times desired to attend inquests while sitting, in very important cases, and I have been informed by other Surgeons that they have been prevented from any introspection by the like hasty summons, even when murder has been apparently the cause for inquiry. In one instance I waited an hour after the time proposed for the meeting of the inquest, without any

other person directed to attend being arrived, and I had to attend again at an inconvenient distance upon an adjournment, without a request to examine into the latent cause of the death, for which the Coroner was, by a judge, reprimanded, and, if I be not mistaken, fined for his neglect. It is of the utmost consequence that professional men should be prepared for making such investigations, by having been early summoned, and having time for getting ready necessary implements; and for previous consideration, as to all the circumstances on which their decision may become requisite.

Besides judging of the appearances on dissection, comparison between these and cases that have arisen from different causes may elucidate useful deductions. The medicine, from which death is supposed to have resulted, may not have wholly disappeared, as arsenic, and may be submitted to an experiment that will be determinate; when the stomach is corroded it may resemble some other fatal case from another cause. Examiners should in their cursory details avoid technical terms, and recite all they discover in language capable of being comprehended by jurors. There are many inquests on accidental death happening from causes that might be prevented, and



if a general inspector were appointed to examine such enrolments annually, a report might be productive of great advantage.

## CHAPTER THE THIRTY-THIRD.

### *On a charitable Fund for the relief of Medical Families.*

#### Section the Hundred & Twentieth.

**I**N a separate inquiry on Parochial Registers, and other miscellaneous subjects, I have already published my general sentiments on charitable Funds; and have particularly enlarged on the necessity of all ancient, as well as modern establishments furnishing the community with a clear account of their income, and expences.

In many counties, the Clergy have instituted a Fund for the relief of their widows and orphans. A similar plan has been adopted in London and in two or three southern counties for the support of the widows and orphans of Medical

Practitioners, and when the success of these laudable foundations is considered, it seems extraordinary that the example has not been generally followed.

A Gentleman with whom I corresponded on this topic expresses himself desirous of the scheme being as extensive, as circumstances may allow.

"I wish," says he, "that it may appear to you eligible to include not only all parts of Yorkshire, but Lancashire, Northumberland, and the county of Durham, from the difficulty, if not impracticability of getting a sufficient number of practitioners in any limited district to set on foot a more confined plan."

The late Sir George Saville refused to contribute to the Leeds Infirmary, unless it were instituted on a general basis, and its future prosperity may be in some degree ascribed to that method having been preferred.—Mr. Casper Veght seems to have proved, that a junction of charitable Funds is the most economical plan. I am inclined to think if many counties would unite, or if this philanthropic plan were universal throughout the nation, the same benefits might be gained at a less expence. An impartial inquiry into the state of medical families would shew, that there are not only widows and orphans in distress, but



also aged or infirm practitioners, that are equally necessitous; and there are some, who, by the charge of a family, are precluded giving a son, that finished erudition, which might prove of real use in future, both to parents, and other relatives.

More than a momentary pittance may be hoped for by those, who have been accustomed to live decently and are incapable of being accused of any indiscretion, but by unavoidable events have been reduced. Regular practitioners, their widows, or orphans, seem to be the proper objects; and a loan towards the medical education of a son would seem proper.

The prosperity of public Institutions depends much on giving satisfactory reports of their progress, and on the Patrons watching the effects, and promoting those, who merit their regard.

Those that have been instructed in the Philanthropic reform, are required for future satisfactory conduct. Sunday-schools have flourished most, when the scholars have been advanced, or placed out by Patrons, who have interested themselves in the childrens making a proper use of the instruction which they have imbibed; this is the best way to remove the objections made to

common persons being taught to read, and to write. In our numerous Manufactories great national advantage has been expected from the employment being adapted to children; but without great attention, inconvenience may arise from the work which they learn being limited, their health being materially injured, their limbs or lives exposed to danger, and their morals corrupted.

We may observe, that most useful contrivances for want of necessary consideration, method, and virtuous principles may be abused; yet the most eminent stations have been filled by persons, who in the early part of their lives, had been assisted in their education at Public Foundations. The ultimate success of such Charities will be found to depend principally on the persevering vigilance of Patrons over those that have been under their management.

### **Section the Hundred & Twenty-First.**

IN the very necessary and useful annual reports of these Foundations, many substantial reasons for a similar Charity have been assigned; such as the costs of a regular education, the mature age requisite as an introduction, the slow advances of Batchelors, the necessary mode of living, and dress; the undeserved preference of Quacks, and



their medicines; the caprice and ingratitude of Invalids, the precariousness of success, the lasting blame attributed to unavoidable failures; the disturbance of mind added to fatigue of body; the difficulty of procuring a satisfactory Deputy, the spirit of rivalry; the exposure to inclement weather, to nocturnal visits, violent accidents, or contagious distempers; together with the rare instances of a fortune being amassed.

Those, who are regularly trained, should have due support in prosperity and in adversity. Much depends not only on liberal contributions, but also on an open, and impartial management.

Industry should always go, hand in hand, with Charity, and those who derive benefit should be ready to afford their Benefactors some token of the donations being properly applied. One that is incapable of supporting himself without charitable assistance may still be competent to some useful employment. The ingenuity of Females might be employed in the contrivance or perfecting of bandages or other mechanism; while professional Practitioners or Students may produce matter for a Medical Concordance, or give some grateful proof of the kindness received.

The College of Physicians Corporation of  
Surgeons, Chartered Company of Apothecaries  
Section the Hundred and Twenty-Second.

THE manner of raising a Fund must next be inquired. The largest computation may be made on those, whose professional emoluments and fortunes enable them to be generous without inconvenience; while others may contribute with a view to the interest of themselves or their family. Although prudence may sometimes dictate that charity should begin at home, yet when men have reaped the benefit of a fruitful stream they should not stop the current, but permit it to extend fertility, for of every one it might with Dryden be said;

“Yet of his little he has some to spare.”

When the indigence of Medical Families originates in unavoidable causes, and approaches us under a correlative state, we ought not to be deaf to entreaty, or suffer self-gratification to be the chief study, especially as the earnings of the profession almost wholly result from importuning affliction, a consideration that should efface all partialities and prejudices.

As the Widows of Medical Men will be principally benefited, such as are affluent may be expected to sympathize and to extend their bounty.



The College of Physicians, Corporation of Surgeons, Chartered Company of Apothecaries, and all Medical Societies it is hoped may lend their assistance. Professors or Teachers of the Art may also in some way or other give their support. Several Druggists have already expressed a readiness to contribute, and there are many Artists connected with the profession who may be expected to unite. The College at Oxford so enriched by Dr. Radcliffe, and the liberality of Medical Men to other Charities may afford hope for many subscriptions from persons out of the profession. Benefactions, profits from publications or wagers, and donations by Will may in time tend to increase the Fund.

## CHAPTER THE THIRTY-FOUR.

### *A Recapitulation, on the Office of a Surgeon-Apothecary.*

#### Section the Hundred and Twenty-Third.

**H**AVING been accustomed to practise in all the separate departments previously enume-

rated nearly thirty years, and having withdrawn from an active station to leisure, and retirement; it occurred to me that my vacant time might not be misapplied, in pointing out the education, and qualifications requisite, for filling the several provinces, in which it had been my study to act with strict integrity, and to which I can now look back with pleasing reflection. The same inclination that I have always had to promote the study, and advancement of a profession, which I cannot but estimate as one of the first in point of utility is still retained; and now actuates me to offer such methodical guidances, and cautious hints, as have been found useful in my own practice, or have been subjoined by my medical friends, to whom I here acknowledge myself under great obligations. My principal design is, that this miscellany may induce the younger part of the profession, to see the necessity of having a regular education, and to invite parents, not only to provide it, but to assist teachers in accomplishing improvement; nor ought the hints respecting preceptors, or the security of patients, to pass unnoticed.

Numerous as the recited characteristics may appear yet one who is a general professor of the art will find all of them ornamental, if not indispensable. A literary character, a skilful adviser,



or an expert operator can only have a just claim to confidence in proportion to his humanity and integrity, for otherwise his excellencies may more effectually empower him to turn his talents to his own, rather than his patient's advantage. An early attention to method cannot be too much urged, it is the master-key to unlock the portal of science, it furnishes expedition, and promotes harmony. An investigation of public business would shew, that method is most cultivated by those, who, from the multiplicity of their concerns, have least time to study it; and as a Surgeon-Apothecary must be liable to multifarious employments, it may be fairly inferred, he ought to be methodical. If we expect this intricate office to be faithfully executed, every thing ought to be cleared from ambiguity, and the duties specifically explained, that proficiency may be rendered less arduous, and beginners be less discouraged. Those, who have a regular training, are interested in suitable examinations being established, to distinguish qualified, from unqualified followers of the profession.

Dogmatical as the pharmaceutic, and surgical forms may to some appear, yet experience has manifested their preference, to a reliance on memory, or culpable omissions.

In country practice the office of an Apothecary,

Accoucheur, and a Surgeon is frequently conjoined, and in a few instances that of hospital, and consulting Surgeon is also combined. To such a practitioner the health of all ranks of invalids is committed, and when this united character is duly maintained, when conduct is not exposed to censure, nor practice disgraced by miscarriage, such a station is truly deserving of encouragement; diligence is intitled to reward, and success to applause. Reflection like a telescope magnifies and brings nearer objects worthy of being known. The branches of science, and some maladies are so nearly akin, that, like the mixed colours in the rainbow, their approaches, or changes require nice distinctions. The exigency of business and quick calls from one province to another may suggest the necessity of a Surgeon-Apothecary being cautiously prepared to meet pressing engagements. The short-sighted, obscure, and fallacious descriptions of many invalids demand more than ordinary intuition in a professor of the several branches, otherwise he will not be competent to explore the real causes of latent diseases, to predict customary events, or to adapt successful remedies. As an Apothecary he must not only find the necessity of being qualified to discern the



propriety of soliciting medical aid, but also the help of an Accoucheur, or Surgeon; and as a Surgeon, he must also discover the peculiar department, to be preferred in asking further advice. As an universal Professor he must feel the benefit of general experience, and of the intimate, and inseparable connection between the respective provinces.

#### Section the Hundred and Twenty-Fourth.

ONE that has such varied employment must be expected to be acquainted with the information published in each branch that he professes, not only modern practice, but exploded notions. The credulity given to Quacks may now and then be attributed to Invalids experiencing a want of exertion in the Surgeon-Apothecary whom they usually employ. A practitioner of this mixed kind in much business, has opportunities of making great proficiency, and becoming a most valuable member of society; but he can scarcely profit by his experience, except his zeal for the profession exceed his taste for other amusement.

The necessary absence from home, and the responsibility requisite should prompt a Surgeon-apothecary to be extremely cautious in the selection of his pupils, to take due pains in their initiation,

and improvement, in proportion to which a master may expect complacence, and profit. A polite address, and an humane attention seldom fail to be powerful recommendations, when accompanied with professional skill, and trusty assistants.

A review of the preceding chapters, on the practice of the distinct branches, may convince an inquirer, that few practitioners need want useful employment ; for as fame is acquired by long experience, more extraordinary abilities will be expected. Except regular practitioners strive to surpass irregulars in conspicuous talents and distinguishing success, such impostors may derive advantage from those, who ought to assist in suppressing them. I cannot take leave of my professional readers without a sincere desire that those who fill this important office should act wisely, uprightly, and liberally ; and that those who are looking up to them for seasonable instruction may improve by their own unwearied assiduity, and ultimately possess those qualifications, which secure honour, and merit esteem.

*F I N I S.*





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## DIRECTIONS TO THE BINDER

N. B. The engraved figure of labels, the table of contents of the shop, and the reference to the shop, are all to be placed between the hundred forty-fourth, and forty-fifth pages.

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